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PYELOVENOUS BACK FLOW *

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A reflux of material from the renal pelvis into the veins of the kidney was described in a recent communication by Hinman and Lee-Brown.[1] The reflux occurred at low intrapelvic pressures varying from 30 to 60 mm. of mercury both in the living and in the recently removed kidneys of sheep, rabbits and dogs.

Although the site of this "pyelovenous back flow" was not definitely determined, injections of collodion and Berlin blue and roentgenograms after injection of sodium bromid solution appeared to show that one or more channels in the region of the tips of the minor calices were forced open, through which material in the renal pelvis flowed directly into a neighboring vein. This phenomenon apparently occurred without the slightest extravasation into the tissues.

These authors made a special point of the observation that in their experiments none of the fluid was ever found higher in the tubular system than the lower ends of the collecting tubules, even though the intrapelvic pressure was elevated gradually to many times that necessary to produce "pyelovenous back flow." They stated that reflux of pelvic contents to tubules was "found impossible of experimental production in the normal kidney," and, furthermore, that "high back pressures of even 400 mm. of mercury, which cause general parenchymal extravasation, failed to cause much deeper penetration of tubules." They found none of the injection fluid in the straight or convoluted tubules or in the Bowman's capsules. These results were in direct contradiction to the work of Blum,[2] of Mason,[3] and of Burns and Swartz.[4]

The thought occurred to us that by carrying out the experiments of Hinman and Lee-Brown with a solution of iron ammonium citrate and potassium ferrocyanid, which produces the Prussian blue reaction when added to an acid-formaldehyd fixing fluid, we might be able to determine quite accurately the path of "pyelovenous back flow," if such a flow, indeed, occurred.

We tried the procedure in a living dog with the circulation undisturbed.[5] Intrapelvic pressure, under manometric control, was varied by the use of the apparatus shown in Figure 1. What might possibly be interpreted as a back flow was obtained at 40 mm. intrapelvic pressure. The pressure was slowly increased from 10 mm. to 100 mm. over a period of two hours and ten minutes. During this time, only 10 c.c. entered the kidney.[6] The kidney and pelvis were now divided longitudinally and placed in the acid formaldehyd mixture. Gross examination showed a coating of blue over the intact pelvis and a streaking of blue from the papilla through the medulla and cortex of each pole of the kidney. There were a few streaks toward the middle of the kidney but many less than toward the poles. On microscopic examination, Prussian blue crystals were found in many of the collecting tubules. There were likewise Prussian blue crystals in the corresponding groups of tributaries; that is, in the ascending and descending Henle's loops, convoluted tubules and Bowman's capsules (Figs. 2 and 3). In none of the sections was there any indication of rupture of the pelvic epithelium. A very few Prussian blue crystals were found mixed with the blood remaining in the veins.

We repeated the experiment, obtained a "back flow" of 0.5 c.c. of solution at 35 mm. intrapelvic pressure, allowed the pressure to rise to 40 mm. over a period of five minutes, and then discontinued the experiment. Nine-tenths cubic centimeter of the injection fluid had run in. The pelvis was intact as before; there was streaking toward each pole, and none at all toward the middle of the kidney. Serial sections made through one half of each pole and a few sections cut through the papilla in the plane of the collecting tubules showed:

(*a*) Several collecting tubules at each pole full of Prussian blue crystals;

(*b*) A larger number of Henle's loops and convoluted tubules containing traces of the blue, and a few tubules containing large amounts of it. None of the Prussian blue had reached the glomeruli. This was possibly due to the low pressure used;

(*c*) In many places, tubules containing the Prussian blue in direct contact with the endothelium of the straight and arcuate veins. In several places the intimate contact was particularly striking, and it was difficult to decide whether or not the injection fluid had actually broken through from the tubule into the vein. One section showed bulging of a thin-walled tubule into a straight vein.

* From the Department of Surgery, Yale University School of Medicine.

1. Hinman, Frank; and Lee-Brown, R. K.: Pyelovenous Back Flow, J. A. M. A. **82**: 607-612 (Feb. 23) 1924.
2. Blum, V.: Ueber den Wert der Pyelographie und anderer Methoden zum Nachweise von Dilatationen des Nierenbeckens, Wien. med. Wchnschr. **62**: 1269, 1912.
3. Mason, J. M.: Dangers Attending Injections of the Kidney Pelvis for Pyelography, J. A. M. A. **62**: 839-844 (March 14) 1914.
4. Burns, J. E., and Swartz, E. D.: Absorption from the Renal Pelvis in Hydronephrosis Due to a Permanent and Complete Occlusion of the Ureter, J. Urol. **2**: 445-454 (Dec.) 1918.
5. Most of Hinman and Lee-Brown's work was done with recently removed sheep's kidneys.
6. Hinman and Lee-Brown state that in their experiments, after the flow started, large amounts of fluid could be slowly injected without elevating the intrapelvic pressure or causing extravasation. When using a syringe they felt a definite diminution in the amount of pressure necessary to advance the plunger at the instant the pyelovenous flow started. Once started, the flow was said to continue at a lower pressure than that necessary to initiate the flow.

These experiments were repeated several times, and in each instance the same streaking of Prussian blue up the tubules was obtained. On microscopic examination the blue was seen in Bowman's capsules in every case in which the pressure was increased to more than 50 mm. of mercury. That this reaction was not due to entrance of the pelvic solution into the blood stream with subsequent secretion through the glomeruli was evident from the fact that only the glomeruli in

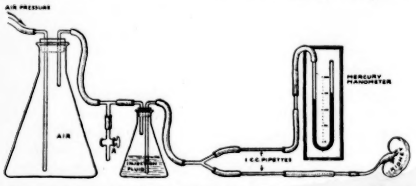

Fig. 1.—Apparatus used in experiments: Air pressure was supplied by a water jet pump and the manometric pressure controlled by adjustment of the valve *A* which allowed varying amounts of air to escape; the kidney was placed on a level with the manometer.

the region of distribution to the blue-filled collecting tubules contained the Prussian blue; none of the Bowman's capsules supplying the middle of the papilla contained even a trace. Furthermore, the same procedure produced identical results in a recently removed kidney, disposing of the possibility of the occurrence of any secretory process. As conclusive proof of this point, and to satisfy ourselves that the discrepancies between our results and those of Hinman and Lee-Brown were not due to their using recently removed kidneys in contradistinction to our use of kidneys in the living animal, we carried out the procedure on a living kidney, on a recently removed kidney of the same dog, and on an eight hour old kidney from another dog, using a 20 per cent. suspension of India ink in physiologic sodium chlorid solution. Results identical with those obtained with the Prussian blue reaction were found, the ink being present in many tubules and in the Bowman's capsules. Another point of interest is that during the experiment on the recently removed and on the eight hour old kidney, not a drop of ink flowed from the open renal vein.

Hinman and Lee-Brown used a variety of animals (dogs, rabbits and sheep) in their work and conclude that "the phenomenon seems due to some fundamental structural weakness which is universal for the amniotic type of kidney."

COMMENT

These experiments seem to justify the following conclusions:

1. A back flow of fluid from the renal pelvis into the tubules and Bowman's capsules may occur under conditions of moderately increased intrapelvic pressure.

2. If a back flow of pelvic contents into the venous system of the living animal ever occurs, the probable mechanism is by rupture of tubules into the large straight and arcuate veins intimately related to them.

3. The conception of a true pyelovenous back flow should not be accepted without further experimental proof.

On the strength of their premise that a true pyelovenous back flow takes place, Hinman and Lee-Brown assume that the rapid absorption of phenosulphonephthalein placed under moderate pressure in the renal pelvis occurs in this manner. Furthermore, in their experiments on hydronephrotic kidneys the rapid appearance of phenolsulphonephthalein in the urine of the opposite kidney was used as a criterion for judging whether "pyelovenous back flow" had occurred. They concluded that a back flow had taken place and on this basis explained the mechanism of hydronephrotic atrophy with tubules functioning for some time after a complete ureteral block, and discarded *en masse* all of the theories of tubular reabsorption. The suggestion was made by them that the bleeding in intermittent hydronephrosis might be the result of the return of blood through the path formed by the "pyelovenous back flow." Finally, they say that they "are inclined to believe that all of the clinical accidents following pyelography are due primarily to the structural phenomenon of pyelovenous back flow."

If "the degree of intrapelvic pressure required to produce . . . pyelovenous flow is always less than maximal secretory pressure,"[1] the openings into the collecting tubules from the pelvis are, then, necessarily patent. The pressure over every square unit of tubule wall is exactly equal to that over every like unit of pelvic wall.

If a ureter is tied off, the intrapelvic pressure gradually rises because of the accumulation of urine passing down the tubules into the renal pelvis. While the pressure increases, it is obvious that some of the collecting tubules must still be open into the pelvis. Therefore, while the kidney is still functioning, it is inconceivable that a pressure lower than maximum renal secretory pressure (that is, a pressure that is said to produce "pyelovenous back flow") should, by valvelike action, which Hinman and Lee-Brown postulate, close over the openings of the collecting tubules into the pelvis. That this does not occur is shown by their figures, which

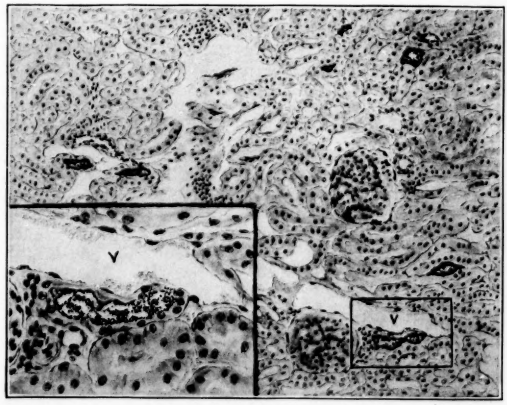

Fig. 2.—Section of a dog's kidney showing Henle's loops, the convoluted tubules and Bowman's capsule containing Prussian blue. Spencer microscope, with ocular, 10×; objective, 16 mm. used; slightly reduced from a drawing with a magnification of 140 diameters. Inset shows a tubule filled with Prussian blue in direct apposition with vein *V*; ocular, 5×; objective, 4 mm.; reduced from a drawing with a magnification of 300 diameters.

show a certain degree of progress of the Berlin blue, which they used for "pyelovenous" injection, up the tubules.

Hinman and Lee-Brown believe that the point of entry of the injection fluid is in the deep sulci of the minor calices and hypothecate that this is due to a structural condition at the bases of the pyramids, which may be analogous to the conditions in the eye whereby under certain conditions of back pressure the fluid of the anterior chamber passes almost directly into the venous system of the sclera. However, at the minor calices in the dog and in man, the pelvic cavity is separated from the venous system by the pelvic epithelium, from two to four cells deep, and a varying amount of fibrous tissue. On the other hand, in the tubules there are numerous areas of direct apposition of a single layer of tubular epithelium with the thin venous endothelium. Under these circumstances, any rupture that allows the contents of the pelvis to run into the venous system would probably occur between the tubule and a straight vein. As Hinman and Lee-Brown point out, the greater ease of "back flow" in hydronephrotic kidneys, with their scarring and thickening adjacent to the pelvis, is difficult to explain on the basis of a pyelovenous rupture. On the other hand, the surviving tubules of a hydronephrotic kidney may be thinner than normal, and thus might more easily rupture into coapted veins. The only capillaries and veins reasonably near the tips of the minor calices are very small. Any pressure which would open out the calices would in all likelihood collapse these veins so that a rupture into them would be improbable. While a rupture into a large vein after traversing a considerable amount of fibrous tissue is the probable route by which collodion or thick gelatin masses enter the veins in injections of the renal pelvis, it is very unlikely that a thin fluid which will run up the tubules should follow any such course.

The roentgen-ray evidence which Hinman and Lee-Brown exhibit as "indisputable" proof of their theory we believe is not convincing, for a rupture of one or more tubules into a vein would produce just as good a venous injection as the rupture of the tip of a minor calix into a vein. The roentgenograms, too, are not inconsistent with the possibility of a certain amount of tissue extravasation with secondary rupture into a vein such as might occur if the experiment was carried out some time after death of the kidney when the tubular system was collapsed.

It is possible that several breaks between tubules and veins occur when the intrapelvic pressure is elevated to a point much above the normal tubular and pelvic pressure; that is, whenever a ureteral block occurs, or during injections for pelvic lavage or pyelography.

SUMMARY

Our experiments show that aqueous solutions and suspensions of India ink in physiologic sodium chlorid solution pass readily from the pelvis of the dog's kidney into the collecting tubules through the convoluted tubules and the loops of Henle into Bowman's capsules, under conditions of gradually increasing intrapelvic pressure ranging from 10 to 100 mm. of mercury.

Directly opposed to these results is the statement of Hinman and Lee-Brown that "injection of the deeper renal tubules is impossible by way of the ureter," even though a pressure approximating 400 mm. of mercury is used.

These authors describe what they designate as "pyelovenous back flow" and believe that it occurs under conditions of moderately increased intrapelvic pressure both in the living and in the recently removed kidneys of sheep, rabbits and dogs.

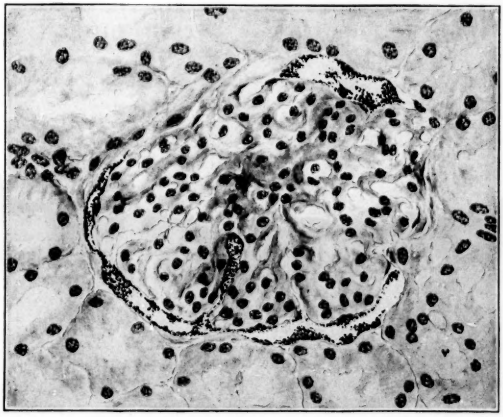

Fig. 3.—A single glomerulus with Prussian blue in Bowman's capsule; ocular, 10 ×; objective, 4 mm.; slightly reduced from a drawing with a magnification of 600 diameters.

We think it more likely that if a back flow of pelvic contents occurs, the ruptures allowing the flow take place in the areas of apposition of the small tubules of Henle's loops and the convoluted tubules, with the large straight and arcuate veins.

Our experiments do not support the conception of a true "pyelovenous back flow" as described by Hinman and Lee-Brown.

Save the Women and Children.—If we examine certain tables in the registrar general's report dealing with causes of death, we find those due to childbearing third on the list. . . . It is obvious from the writings and speeches of public health officials, as also of the laity, personally or combined in the form of the approved societies, that a movement is taking place to insist that the present deplorable maternal and infantile mortality and morbidity ought to be, and shall be, diminished. If, therefore, the medical profession itself does not take up the question seriously and now, it will wake up one morning to find that all kinds of rules and regulations have been made that may seriously affect its position. Let us all do our best; it is no use cursing each other; this will not improve matters; this will not save a single life. The general practitioner, apart from the patient, is the most seriously concerned. By insisting on antenatal supervision, by linking up with the county health authorities, by welcoming the assistance of obstetric experts, bacteriologists, trained nurses and voluntary societies, by reporting at once cases of fever during the puerperium, by giving willingly all the information he can to those constituted to receive it, the general practitioner is bound to be the chief instrument in the reduction of the maternal and infantile mortality and morbidity.—Berkeley, Comyns: *Brit. M. J.* **1**:4 (Jan. 2) 1926.

PARTIAL GASTRECTOMY

ITS INDICATIONS, PROPHYLAXIS AND TECHNIC *

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There are two definite classes of lesions of the stomach in which gastrectomy may be indicated. One is malignancy, and the other is peptic ulcer with its complications or sequelae. The first indication, malignancy, admits of no discussion. Gastrectomy is the only known cure for cancer of the stomach. Unfortunately, many patients suffering from this disease come too late for a radical operation, and there is sometimes a tendency to wait too long under medical treatment while the cancer continues to develop. Just what proportion of benign gastric ulcers become cancerous it is difficult to state. The percentage of gastric cancers arising from a peptic ulcer base is estimated at from 10 to as high as 70, the latter being the figures given by the Mayo Clinic. That a certain proportion of gastric peptic ulcers do apparently develop into cancer is admitted by all pathologists interested in the study of cancer of the stomach.

The indications for gastrectomy for a gastric peptic ulcer are to some extent involved in the consideration of the tendency of these ulcers to become cancerous. Besides, there seems to be less success in the medical treatment of gastric ulcer than of duodenal ulcer. If the ulcer heals, it may leave large scars and contractions, sources of irritation and sometimes of obstruction, such as stenosis at the pylorus or hour-glass contraction in the body of the stomach.

Undoubtedly an early gastric ulcer should be given medical treatment for several weeks, at least, before operation is considered. If there is a tendency for the ulcer to heal under medical treatment, as observed by improvement in symptoms and by careful roentgenologic examinations made at intervals of several weeks, the medical treatment may be continued indefinitely. If, however, the ulcer heals only to a certain stage and remains stationary, or if it increases in size, an operation should be done. It must be remembered that even when a gastric or duodenal ulcer has healed from medical treatment it does not always stay healed. One of Dr. W. H. Mayo's famous epigrams is that he does not operate on a peptic ulcer until it has been cured by medical treatment at least nine times. The operation of gastrectomy, then, is not indicated in peptic ulcers until medical treatment has been given a reasonable trial, unless the ulcer is large and adherent and it appears improbable that medical treatment will benefit. Whenever there is a suspicion of malignancy, operation should be promptly done. A gastric peptic ulcer an inch (2.5 cm.) in diameter is always suggestive of malignancy. In advanced cases there seems no reason for unusual delay in operation. Recurrent bleeding and perforation, of course, demand operation.

All stomachs that are operated on, however, are temporarily impaired because of the operation, and medical treatment and regulation of diet should be given by an internist, not only during the convalescence but also for months after the operation. If this is done and a suitable operation has been properly performed, the patient should become and remain symptom-free.

The indications for gastrectomy and for other operations on the stomach must often be compared. I see no occasion for the routine performance of an extensive gastrectomy whenever there is a peptic ulcer, even in the duodenum, which seems to be the practice of some radical schools of gastric surgery. The theory that the pyloric mucosa secretes a specific hormone, gastrin, which is absorbed in the blood and stimulates the secretion of gastric juice, and that, consequently, when the pyloric portion of the stomach is removed the secretion of gastric juice will be decreased, is no longer generally held. Carlson and Ivy have not found proof of this theory of Edkins, though there is doubtless some substance in the food which is absorbed by the gastric mucosa and which stimulates the secretion of gastric juice. The pyloric mucosa gives an alkaline secretion, and there seems to be no specific hormone derived from it.

Duodenal ulcers should be very rare indications for gastrectomy, because they can be dealt with either by pyloroplasty if the ulcer is small and accessible or, if it is large and infiltrating, by occlusion of the pyloric end of the stomach with kangaroo tendon and a posterior gastro-enterostomy. The latter operation in large duodenal ulcers gives excellent results. Occasionally there occurs a small duodenal ulcer with an open pylorus, many adhesions and marked pylorospasm. Here, gastro-enterostomy may not relieve the symptoms, and the operation of Devine is indicated.[1] The stomach is divided about the junction of the pyloric and cardiac portions, the distal end is sutured and left as a pouch, and the cardiac end is brought through the transverse mesocolon and united to the jejunum as in posterior gastro-enterostomy (fig. 1). The open pylorus then conveys to the duodenum only the alkaline secretion from the pyloric portion of the stomach and not the acid gastric juice of the cardiac portion.

When ulcers have recurred after a pyloroplasty or if they persist after a gastro-enterostomy, gastrectomy is often indicated. According to Lewisohn [2] of Mount Sinai Hospital, New York, after a duodenal ulcer has healed following gastro-enterostomy, if the gastro-enterostomy is disconnected and food permitted to follow the normal channel, the duodenal ulcer may again become active. Recurrent ulcers or persistent ulcers after gastro-enterostomy, then, particularly if the ulcer is on the gastric side of the pylorus, are indications for gastrectomy.

The pyloric portion of the stomach may be removed after a gastro-enterostomy has been previously done, but the stump of the stomach should be infolded in such a manner that the lesser curvature is buried by the sutures and points toward the gastro-enterostomy stoma. Otherwise, the current of peristalsis may be directed toward a blind pocket. If the gastro-enterostomy has been made near the cardiac end and as much as half of the stomach must be resected, this infolding of the stump of the stomach is unnecessary, because peristalsis occurs chiefly in the right half of the stomach; and, this having been removed, the left half, which merely contracts tonically, may empty in any direction. Here gravity helps.

Jejunal ulcers are an indication for partial gastrectomy. Balfour [3] recommends this operation as very satisfactory for jejunal ulcers. If a gastro-enterostomy is disconnected and the stomach contents are returned

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1. Devine, H. B.: Basic Principles and Supreme Difficulties in Gastric Surgery, Surg. Gynec. Obst. **40**: 1-16 (Jan.) 1925.
2. Lewisohn, Richard: Personal communication to the author.
3. Balfour, D. C.: Partial Gastrectomy for Gastrojejunal Ulcer, Ann. Surg. **79**: 386 (March) 1924.

to their normal channel over the scar of a healed ulcer in the duodenum or pylorus, the ulcer may recur. As jejunal ulcers are almost unknown except after gastro-enterostomy, their prophylaxis might abolish the necessity for partial gastrectomy, at least in some cases. A jejunal ulcer is often very difficult to cure. It has a great tendency to burrow, and occasionally fistulous openings connect this ulcer with the colon. These ulcers are doubtless much more common than is generally supposed.

Lewisohn [4] has reported 34 per cent of jejunal ulcers following gastro-enterostomy done at Mount Sinai Hospital from 1915 to 1920, inclusive. As is well known, the general standard of surgery at Mount Sinai is high. Lewisohn followed these cases carefully, and thinks that the astoundingly large proportion of cases of jejunal ulcer after gastro-enterostomy in this series is due to the thorough manner in which the after-results have been checked. It is an almost universal experience that gastro-enterostomy, after the pylorus has been closed by a stenosis, is a very satisfactory operation. The stenosis maintains the alkalinity of the duodenal contents, which seems to protect the jejunum at the gastro-enterostomy. When the pylorus is open, however, gastric juice escapes through the pylorus as well as through the stoma of the gastro-enterostomy. The duodenal alkalinity, consequently, is reduced and cannot protect the jejunal mucosa, which is accustomed only to alkaline material, from the acid gastric juice of the stomach poured into it through the gastro-enterostomy. If, then, we could deduct from this series of cases those of cancer, in which the acid is known to be low, and those of stenosis of the pylorus, it would seem that the incidence of jejunal ulcer in the remaining cases reported by Lewisohn would probably be even higher than 34 per cent.

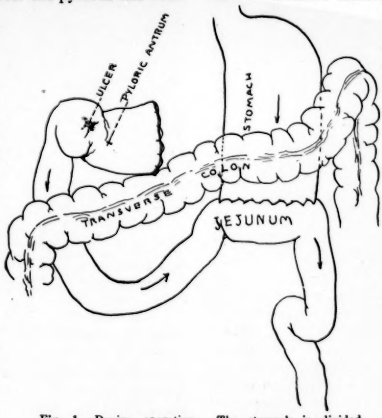

Fig. 1.—Devine operation: The stomach is divided about opposite the incisura angularis; the pyloric portion is sutured and forms a pouch: the cardiac end is brought through the transverse mesocolon and anastomosed to the jejunum.

Recurrence of ulcer after pyloroplasty may be an indication for gastrectomy. In the pyloroplasty that I [5] have been doing for seven years, the technic consisted in incising the pyloric canal and placing transversely a row of sutures in the pyloric mucosa and then two other rows of sutures above this. I have done sixty-eight of these physiologic pyloroplasties. There were three deaths in the first twelve cases. These have been explained fully in other communications, one of them being due to hemorrhage on the twentieth day from a gastric ulcer on the posterior wall, which was excised from within the stomach at the time of operation and sutured too tightly. Another was due to a late hemorrhage from a stenosis at the pylorus and incised posteriorly. The bleeding area was sutured, but a fatal hemorrhage occurred on the ninth day. The third death was from uremia following pyloroplasty in a patient whose kidney function had not been sufficiently studied at the time of operation. These deaths could in all probability be avoided now. Since the first twelve cases, I have done fifty-six of these pyloroplasties without a death. The chief objection to the operation as originally described was a rather large percentage of recurrent ulcers. We have followed the cases carefully, and while the series of recurrent ulcers is not nearly as great as the group of jejunal ulcers after gastro-enterostomy reported by Lewisohn, it is much too large. There are fourteen cases of recurrent ulcer (20.5 per cent). I have reoperated on seven of these patients, the operation being either partial gastrectomy or gastro-enterostomy. Seven either have been operated on elsewhere, or the ulcers have been demonstrated as recurrences by roentgenologic examination.

It must be recalled that the pyloric mucosa, which secretes alkaline material, is a favorite site of peptic ulcer, whereas jejunal ulcers are almost unknown without gastro-enterostomy. It is important in every operation for peptic ulcer to remove all septic foci, and doubtless some of the recurrences in the earlier cases were due to the neglect of this precaution. Most of them, however, were probably due to the suturing of the pyloric mucosa. Dragstedt's [6] work in producing ulcers in the pyloric mucosa of a dog is most instructive. He has shown that an excellent method of making an ulcer in the stomach of a dog is to place a number of sutures in the pyloric mucosa, which is the sensitive region in the stomach for peptic ulcers. Unconsciously, in inserting the row of sutures in the pyloric mucosa, I have been doing for the patient just what Dragstedt did when he created experimental ulcers.

Since May, 1921, I have abandoned this inner row of sutures, and the technic now emphasizes avoiding clamping or suturing the pyloric mucosa in any way. The inner row of sutures formerly employed is omitted, and the first continuous row of sutures now approximates the muscular and peritoneal coats of the stomach at the lower and the upper angles of the wound. When the duodenum is reached, all of the wall of the duodenum is included in the suture, because it is not practical to separate its mucosa; while the suture on the stomach side catches only the muscular and peritoneal coats, the utmost care being taken to avoid even seizing the pyloric mucosa with forceps. This brings over the pyloric mucosa as a curtain and seems to protect the sutured duodenal mucosa. Another row of sutures buries this first row. Since this technic was adopted, the cases have been too few to estimate the eventual

4. Lewisohn, Richard: The Frequency of Gastrojejunal Ulcers, Surg. Gynec. Obst. **40**: 70 (Jan.) 1925.

5. Horsley, J. S.: A New Operation for Duodenal and Gastric Ulcer, J. A. M. A. **73**: 575-582 (Aug. 23) 1919.

6. Dragstedt, L. R., and Vaughn, A. M.: Gastric Ulcer Studies, Arch. Surg. **8**: 791-810 (May) 1924.

results, but I believe it will greatly diminish the incidence of recurrent ulcer, and may abolish it.

In operations for gastric peptic ulcers the work of the late W. L. Rodman should be borne in mind. Many years ago he recommended excision of the ulcer-bearing area in order to obtain the best results. This area, as we have seen, is the pyloric portion of the stomach, and its excision, as Rodman has suggested, seems necessary when there is a tendency to ulcer formation after septic foci have been eliminated.

To Jan. 1, 1924, I had been doing chiefly the Polya partial gastrectomy, or rather Balfour's modification of it, in which the jejunum is brought in front of the transverse colon and applied to the stump of the stomach. In my hands, this operation has not been always satisfactory. The two long limbs of jejunum over the transverse colon are sources of potential trouble. Entero-anastomosis between the two limbs of the jejunum as they cross the transverse colon may, of course, overcome some of the tendency to kinking and obstruction, and should always be done in the Polya-Balfour operation. This, however, tends to short-circuit at least some of the duodenal contents, and may predispose toward a jejunal ulcer by removing the protection of the alkaline duodenal contents that normally flow over that portion of the jejunum apposed to the stomach.[7]

Fig. 2.—Modified Billroth I operation: The pyloric portion of the stomach has been resected, and the posterior wall of the upper portion of the stump of the stomach has been united to the posterior wall of the duodenum with interrupted mattress sutures of fine tanned catgut.

It is difficult to improve on the normal physiologic function of viscera, and if we can adapt operative procedures to physiologic function while correcting the pathologic conditions, it is always well to do so. The duodenum is the normal mixing chamber for the contents of the stomach and the duodenum, and the Billroth I operation preserves this. In the technic as originally described by Billroth, the stump of the duodenum was joined to the stump of the stomach along the greater curvature, and the upper portion of the gastric stump was closed down to the duodenum, where the line of sutures split as an inverted Y. At this spot

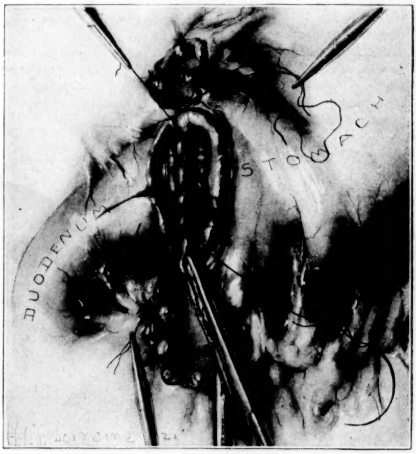

Fig. 3.—The posterior margin of the stump of the stomach is sutured to the posterior margin of the duodenum with a continuous lockstitch of no. 1 tanned catgut. When the lower border of the duodenum is reached, an incision about 1½ inches (3.8 cm.) long is made into the anterior wall of the duodenum in order to flare it open and make the duodenal surface larger.

where the three limbs of the Y converge, leakage often occurred. Another objection to this technic is that the anastomosis is along the greater curvature, whereas the axis of peristalsis is along the lesser. Then, too, in the Billroth I operation the infolding of the thick wall of the stomach in union with the thin wall of the duodenum often constricts the opening too greatly. I have modified this operation so that the stomach is united to the duodenum along the lesser curvature, and the lower portion of the gastric stump is infolded and further protected by suturing over it adjacent peritoneal covered fat. By these procedures the safety of the suturing of this region is assured. To avoid obstruction I make an incision in the anterior wall of the duodenum about an inch or an inch and a half long, which flares open the duodenum and gives a much greater caliber at the point of union with the stomach. Half of the stomach can often be resected and still joined satisfactorily to the stump of the duodenum by following this type of operation. The cardiac portion of the stomach may be mobilized by dividing any adherent band or incising the gastrohepatic omentum. The stump of the duodenum can be slightly mobilized by separating it from the surrounding tissue. It is better, however, to mobilize the gastric stump more freely than to attempt extensive dissection of the stump of the duodenum.

TECHNIC OF OPERATION

The gastrohepatic omentum is opened and the gastric arteries along the lesser curvature are doubly clamped and divided at

7. Mann, F. C., and Williamson, C. S.: Experimental Production of Peptic Ulcer, Ann. Surg. **77**: 409-422 (April) 1923.

the proposed site of division of the stomach and near the duodenum. The stomach is lifted up, the gastrocolic omentum is incised, and the vessels along the greater curvature are doubly clamped and divided. The lesser peritoneal cavity is packed off, and the clamped vessels are controlled by transfixing and tying the tissues around them with plain catgut in a needle. Two ligatures are tied on the larger vessels for additional safety. A small Payr clamp is placed on the duodenum near the pylorus, and soft-bladed forceps are applied close to the clamp. The duodenum is severed with the electric cautery flush with the clamp.

The pyloric end of the stomach is lifted up slowly, to avoid regurgitation of gastric contents into the esophagus and pharynx. If the stomach is distended, a Payr clamp may be placed on the body of the stomach before the pylorus is severed, though it is somewhat better to secure a good view of the posterior surface before this clamp is applied. After the clamp is on the body of the stomach, a pair of long soft-bladed forceps is placed close to the clamp, and the stomach is severed with the electric cautery flush with the clamp. The stump of the stomach is brought over to the duodenum, and the posterior wall of the upper portion of the stump of the stomach is united to the posterior wall of the duodenum with either a continuous mattress suture or a series of interrupted mattress sutures of 00 tanned catgut. The ends of the lower and of the upper sutures are left long (fig. 2). The Payr clamp on the stomach is removed and Ochsner forceps are placed on the crushed margin of the lower portion of the stump of the stomach while the upper part is opened and the stomach contents are removed with a suction apparatus. The Payr clamp on the duodenum is

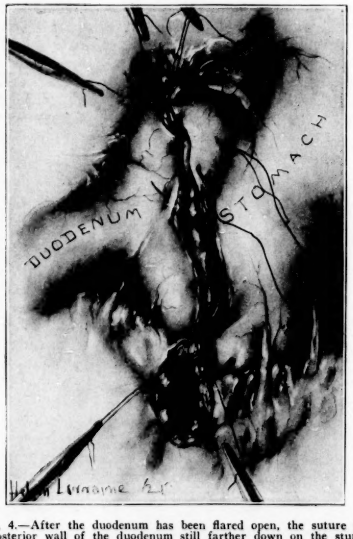

Fig. 4.—After the duodenum has been flared open, the suture unites the posterior wall of the duodenum still farther down on the stump of the stomach. This prevents constriction at the junction of the stomach and duodenum. A continuous suture is applied anteriorly, inserted as a baseball stitch, and drawn snugly. In this way bleeding is controlled and at the same time this suture does not leave the rather large ridge of tissue which occurs after the application of the regular continuous suture or the lockstitch.

removed and the duodenal contents are drawn off with a suction apparatus. The upper border of the stomach at the lesser curvature is united to the upper border of the duodenum with a no. 1 tanned catgut suture, which is continued downward, on the mucous surface, uniting the posterior wall of the stomach with the posterior wall of the duodenum. When the lower border of the duodenum is reached, an incision about an inch and a half long is made in the anterior surface of the duodenum to flare it open (fig. 3). This permits more duodenal surface to be united to the stump of the stomach, and so obviates undue constriction here. The redundant lower part of the stump of the stomach is closed by continuation of this suture over it to the greater curvature as an occluding

Fig. 3.—The redundant portion of the lower end of the stump of the stomach is invaginated with a purse-string suture. This suture is then continued upward as a right-angle continuous suture, burying the inner row of sutures. An additional mattress suture is placed at the lower border of the duodenum and also catches somes adjoining peritoneal covered fat in order to reinforce this point.

hemostatic stitch, no effort being made to invert the tissues. The suture may then be doubled back on itself and carried anteriorly as a baseball stitch, uniting the anterior wall of the stomach to the anterior wall of the duodenum. If the tissues are quite thick, it may be best to terminate this suture at the lower border of the stomach and use another suture to unite the anterior wall of the stomach to the anterior wall of the duodenum, beginning above and going down as a baseball stitch, catching all the coats of the duodenal and gastric walls (fig. 4). As the pyloric portion of the stomach has been removed, the mucosa of the cardiac portion contained in the stump may be caught in the suture, as ulcers do not tend to occur in this region.

A purse-string suture invaginates the lower portion of the stump of the stomach along the greater curvature, and this suture is then continued anteriorly as a continuous right-angle suture, with a backstitch at intervals, burying the internal row of sutures, and is terminated at the lesser curvature (fig. 5). A mattress suture is placed at the lower border of the duodenum still further to infold the tissues, and with this suture is also caught some neighboring gastrocolic omentum. If there is any weakness in the sutures or any unusual tension, the whole anterior line of sutures can be covered with gastrocolic omentum; but this is not necessary as a routine measure. At the upper border an additional interrupted mattress suture of 00 tanned catgut is placed to strengthen the union at this point, and the neighboring stumps of gastrohepatic omentum are caught in this suture.

From Jan. 1, 1924, to Jan. 1, 1926, I have done thirteen partial gastrectomies. In all of these cases the stump of the stomach was united to the duodenum.

In three the union was according to the technic of the Finney-Haberer operation, the end of the stomach being implanted into the side of the duodenum after it was thoroughly mobilized. In two of these cases the stomach did not empty satisfactorily, probably because in this operation the stump of the stomach is fixed to the side of the duodenum and so cannot fully contract, and as the circular fibers of the duodenum are divided this also partially prevents contraction. In one of these cases in which the emptying was not satisfactory, I think it is probable that I placed too many sutures at the lower margin of the wound and turned in too much tissue, so producing a partial obstruction. After gastro-enterostomy, however, these two patients made a smooth recovery, and when last heard from were complaint-free. One of these three patients had no trouble whatever either in the postoperative recovery or thereafter. In the other ten cases, operation was done by the modified Billroth I method that I have described.

Two of the three Finney-Haberer operations were for recurrent ulcer on the gastric side after pyloroplasty, and the third was for a "kissing" ulcer in the pylorus that had not been previously operated on. Of the ten modified Billroth I operations, three were for cancer and five for ulcer, one for torsion of the gastrohepatic omentum, and one for recurrent bleeding from erosion of the gastric mucosa following gastro-enterostomy.

REPORT OF CASES

T. M. H., a man, aged 69, whose case was reported before the Medical Society of Virginia in October, 1924, had an aortic valve lesion. A partial gastrectomy for rather extensive cancer was done under local anesthesia, and his pulse was not over 80 during the operation. He made an uneventful operative recovery, and left the hospital in good condition. For about three months his health was good. Then he developed symptoms and finally died at his home in the country about six months after the operation from what appeared to be metastases in the liver and mediastinum. There was no necropsy. The length of the stomach removed in this case was 16 cm. along the greater curvature.

C. H. M., a man, aged 55, had a very extensive carcinoma of the pyloric portion of the stomach. It was questionable whether a radical operation would be justifiable. There were some adhesions posteriorly. The adherent stomach was separated from the pancreas, and the modified Billroth I operation was done under local anesthesia. Before the stump of the stomach was united to the duodenum, a mass on the pancreas which was thought to be a metastasis was excised. There was considerable inflammatory infiltration around this. The pancreas was sutured and omentum was brought over it. The patient left the table with a pulse of 90, and in excellent condition. Two days afterward he developed symptoms of peritonitis with obstruction. Drains were placed and an enterostomy was done. The infection spread, however, and the patient died on the eleventh day after operation. Examination of the mass removed from the pancreas showed it to be inflammatory. The cancer was very extensive in the stomach, and there was much necrotic tissue. Saprophytic and other bacteria had evidently infiltrated the surrounding tissues and formed on the pancreas an inflammatory mass which was taken to be cancerous. Excising this mass stirred up the infection. Probably if it had been left, the patient would have made a satisfactory recovery.

The third cancer case was that of C. L. W., a man, aged 71. The operation was done under local anesthesia. The patient left the table with a pulse of 74. The specimen, consisting of about half the stomach, measured 23.5 cm. along the greater curvature. The patient made an uneventful recovery.

In one of the patients, a gastrectomy was done for strangulation of a part of the gastrohepatic omentum. One gastrectomy was for jejunal ulcer which followed a previous gastro-enterostomy, done elsewhere. In one of the cases there were two ulcers in the pyloric portion of the stomach; in another an ulcer in the lesser curvature was suggestive of malignancy. One partial gastrectomy was for a large ulcer in the posterior wall of the stomach, which had perforated and formed a cavity whose posterior wall was the surface of the pancreas and the surrounding tissue. The wall of the abscess was dissected out along with the specimen, which measured 18 cm. along its greater curvature. The patient, aged 65, had old pulmonary tuberculosis, and his general condition was not very good. The operation was done under ethylene anesthesia. He made a satisfactory recovery. One operation was for recurrent ulcer after pyloroplasty, and one was for bleeding from a lesion of the gastric mucosa about one year following gastro-enterostomy done elsewhere.

COMMENT

Since adopting this technic, I have not encountered any case of gastrectomy, even though the maximum specimen has been 23.5 cm. long, in which the stump of the stomach could not be united to the stump of the duodenum by this modified Billroth I operation. If, however, this is impossible, I believe that the Hofmeister operation, a modification of the Billroth II, would be the operation of choice. Instead of the stump of the stomach being sutured and an independent posterior gastro-enterostomy being done, as in the original Billroth II operation, the upper portion of the stump of the stomach is closed with sutures and the lower third is anastomosed to the jejunum. This is simpler than the original Billroth II and seems to be quite as efficacious. It must be recalled that the absence of peristalsis in the left third of the stomach does not necessitate the performance of an anastomosis in any particular axis, because here the contractions are tonic and gravity really helps, whereas in a region of the stomach with active peristaltic waves the anastomosis should be made as far as possible along the lesser curvature.

HEXYLRESORCINOL IN INFECTION OF THE URINARY TRACT

RESULTS IN SIXTY-THREE CASES *

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The most recent contribution to the legion of urinary antiseptics is hexylresorcinol, which was recently introduced by Leonard. As the use of this drug is still more or less in the experimental state, a report of results in the treatment of sixty-three cases of urinary infection, ranging from simple acute cystitis to chronic bilateral nephrosis of twenty years' standing, may be of timely interest. My results agree with those of Leonard in that acute vesical infections due to staphylococci have cleared up with hexylresorcinol very quickly and completely. Infections with *B. coli* were not as resistant to the bactericidal effect of the drug as our clinical impressions and the reports of Leonard would lead one to expect. In chronic mixed infections of the bladder and upper urinary tract, symptomatic improvement was achieved without much change in the urine so far as the bacterial or pus content was concerned.

Hexylresorcinol is an alkylized resorcinol. The resorcinols were first synthesized in 1913 by Johnson and examined by Rettger, who found that, as the series of alkyl resorcinols was ascended, the bacteri-

* From the Section on Urology, Jackson Clinic.

cidal properties of the product increased very rapidly. In 1914, Leonard undertook a biologic investigation of these compounds and found that, coincident with the sharp rise in bactericidal power, there was a sharp drop in toxicity. The hexyl derivative of resorcinol exhibited a phenol coefficient of 46, the bactericidal power of resorcinol being multiplied more than 150 times. The drug can be administered by mouth in large doses without apparent toxic effect. At intervals during the last ten years, Leonard has carried on extensive experimental work with this drug and others of the series of resorcinols to determine their bactericidal properties in the urine. He found that the maximal bactericidal effect of the resorcinol chain is reached in the sixth carbon atom straight chain derivative—normal hexylresorcinol. In addition to being a far more powerful germicide than any substance ever before described as possessing an equal degree of toxicity to animals and man, it meets the qualifications of an ideal urinary antiseptic. It is administrable by mouth, chemically stable, nontoxic in therapeutic doses, nonirritating to the urinary tract, bactericidal in high dilution in urine of any reaction, and is excreted by the kidney unchanged, in sufficient percentage to impart active bactericidal properties to the urine. The bulk of each dose is probably rendered inert as a chemical conjugate.

In the treatment of practically every type of urinary infection with hexylresorcinol, I have found relief of vesical irritability to be the outstanding result. In most cases, frequent urination, burning and tenesmus are completely relieved. Many of the patients here reported had been treated with other forms of therapy without result, which made the success following the use of hexylresorcinol the more satisfying.

This symptomatic relief, while a virtue in itself, might be retroactive in that it might cause negligence in the search for obstructive lesions, which so frequently are important factors in infections of the urinary tract. The most thorough investigation for conditions interfering with normal urinary drainage and the institution of the necessary procedures to correct such conditions should be carried out in every case, especially when the history is of any duration. It cannot be emphasized too strongly that any drug therapy for urinary tract infections should be an adjunct to such procedures, and not a substitute for them.

Approximately 50 per cent of the patients in this series have had gastro-intestinal disturbances, varying from slight gastric distress to severe bloating, belching, nausea, vomiting and diarrhea. Perhaps these disturbances have been due as much to the oil in which the drug is suspended as to the drug itself. Practically all patients who had such difficulty did not digest fats easily and were generally subject to more or less gastric distress and constipation. By taking the capsules fully an hour after meals with milk instead of water, most of the patients were able to overcome these disturbances. Some of the patients have considerable difficulty in swallowing the large capsules; but if these are held in the mouth until soft, they are swallowed much more easily and seem to cause less distress.

Two of the sixty-three cases analyzed as a basis for this paper are not included in the tables. One of these patients, a pregnant woman with an extreme intoxication, was unable to tolerate the drug. In the other case, one of subacute trigonitis, cultures could not be made, but symptoms were completely relieved following the administration of hexylresorcinol for two weeks.

The site of infection in the urinary tract was: upper, two cases; lower, thirty-eight cases; upper and lower, twenty-three cases. Complications included ureteral stricture with hydronephrosis, vesical and ureteral calculi, hypertrophied prostate, bladder diverticuli, and vesical neck contracture. Appropriate treatment was instituted in all these conditions.

Of the three cases which showed no clinical improvement and in which the pus content and cultural findings of the urine remained unchanged, two were due to severe *B. coli* infections of the prostate and seminal vesicles complicating gonorrhea. The other case occurred in a frail elderly man with a marked vesical neck contracture, chronic, purulent cystitis, and bilateral pyonephrosis due to staphylococcic infection. Dilation of the vesical orifice or operative treatment to correct the obstruction was refused, and the patient remained on drug therapy for only twenty-four days.

Results of Use of Hexylresorcinol in Sixty-One Infections of the Urinary Tract

Staphylococcic Infections	Number	Per Cent of Total	Per Cent of Group
Cure	9	15	36
Clinical cure	9	15	36
Symptomatic improvement	6	10	24
No change	1	1	4
Total	25	41	
B. coli Infections			
Cure	8	13	35
Clinical cure	6	10	26
Symptomatic improvement	7	12	30
No change	2	3	9
Total	23	38	
Mixed Infections			
Cure	2	3	15
Clinical cure	4	6	31
Symptomatic improvement	7	12	54
Total	13	21	

Two patients with tuberculous cystitis remaining after nephrectomy and ureterectomy were considerably relieved of tenesmus and frequent urination while taking the drug. Only one case is reported in this series. The urine in both cases contained a great deal of pus and showed a heavy growth of staphylococcus on culture. Under treatment, which lasted nine weeks in one case and twelve in the other, the urine became practically negative; although the cultures remained positive, the colonies were greatly reduced in number.

The average daily dose of the drug was from nine to twelve capsules. Each capsule contains 0.15 gm. of hexylresorcinol. The dose was determined by the patient's tolerance and the virulence of the infection. Without question, the higher the concentration of the drug in the urine, the quicker and more complete is the therapeutic effect. In the acute cases, most of which were due to staphylococcic infections, treatment was continued from seven to thirty days. Although the drug was given for an average of from thirty to sixty days in most of the chronic cases, it was necessary to prolong treatment for four or five months in a few very resistant infections. When infections have been present for years with extremely unpleasant symptoms, most patients have secured sufficient relief, so that they do not consider the prolonged treatment a burden. The expense of the drug is probably its greatest objection, for which reason fifteen of the patients were obliged to discontinue treatment.

Types of infection in which beneficial results cannot be expected are (1) infections of the kidney, (2) renal

and bladder tuberculosis, (3) infections of the prostate and seminal vesicals, and (4) gonorrheal urethritis. It seems self evident that in infections of the renal substance, the prostate and the seminal vesicles, the drug is not brought in contact with the offending bacteria in sufficient concentration or for sufficient length of time to have an inhibitory or lethal effect. Also, urine containing the drug does not come in contact with invading organisms in the urethra for a sufficient length of time to exert a bactericidal effect.

In infections of the mucous membrane of the bladder and upper urinary tract, however, conditions make possible the contact of urine containing a germicidal drug for relatively long periods of time, and if the drug is in high enough concentration, definite lethal or inhibitory effects may reasonably be expected. Hexylresorcinol should be used in keeping with Leonard's suggestion that fluid intake be reduced to insure as high a concentration of the drug in the urine as possible.

In practically every particular, my experience leads me to endorse Leonard's claims for hexylresorcinol, which undoubtedly may be considered a most valuable adjunct to our present means in the treatment of infections of the urinary tract.

THE TREATMENT OF ACUTE TRAUMATIC CRANIOCEREBRAL INJURIES *

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In presenting such a subject as the treatment of acute traumatic craniocerebral injuries, just as great a difficulty lies in the selection of a descriptive term to include the entire field as in the universal acceptance of a uniform, proper treatment in this condition. The term fractured skull no longer conveys the true significance of the injury in that no provision has been made for the possible associated trauma of the intracranial contents. To employ the term acute brain injuries also bears the same objectionable defect in clarifying the picture by omitting the state of the calvarium. Thus, it appears to me that the term craniocerebral not only is descriptive but also covers every contingency possible in head injuries.

In attempting to discuss a rational procedure for the proper treatment of acute brain and skull injuries, one is immediately confronted with the existence of many diversified methods of treatment in vogue at the present time. Whenever such a discord exists and a generalized routine measure of therapy is not adopted or accepted by the majority of the profession, it merely indicates a lack of the proper comprehension of all the pathologic phases or pathogenesis of the condition, and it is to be expected that when such a state of turmoil is present every surgeon will naturally differ not only in his therapy but also in the time of application of his measures. The therapeutic indications become a matter of individual and personal equation. Such a situation should now be obsolete, and definite laws for the treatment of craniocerebral injuries should be as well established and firm as the treatment of acute appendicitis. To elucidate what is implied above, a single illustration will suffice for our purpose here. For instance, in the treatment of acute cerebral edema some men advocate dehydration solely in one form or another; others rely only on repeated lumbar punctures, while still others resort indiscriminately to operative measures and yet another group institute practically no treatment at all except rest in bed, with an ice cap and general observation, which at times really constitutes nothing more than ignorance and criminal negligence. Yet each group can not be entirely wrong all the time. They all possess their merits, which if incorporated into one plan of treatment would produce the ideal that we are seeking. The essential policy for us is to learn what to do and when to do it, so that the patient will derive the most benefit from our treatment and will be returned to as near economically and emotionally normal as possible under the varying circumstances of the nature of the trauma.

In dealing with a subject of this kind, the question of the degree of importance attached to skull fractures per se, aside from depressed fractures, immediately presents itself not only to the physician but also to the layman. We should all now be past that stage when the term fractured skull, except depressed fracture, looms up as a skyscraper in importance in acute traumatic craniocerebral conditions. Those of us who treat many cases of head injuries have come to realize that the patient is far more fortunate with a fractured skull, when a cerebral complication is concomitant, than without it. Very often his life is spared because of nature's method of decompression established by the fracture, and at other times surgical intervention is necessitated; the former is a natural decompression whereas the latter is an artificial one.

To portray lucidly the many angles of this important topic, it is essential, before proceding any further, to classify or subdivide the types of cranial fractures with their possible complications which come under our observation. Fractures of the skull are divided into (1) depressed fractures, (2) linea fractures of the vault and (3) fractures of the base of the skull. Any of these may be associated with an intracranial complication such as hemorrhage, cerebral edema, laceration and contusion of the brain or infection, either primary or secondary. The treatment of the clean and simple cases will receive our consideration first, as they predominate, and the modification and alteration of the outlined therapy will be presented when the complicating factors enter into this picture.

DEPRESSED FRACTURES AND COMPLICATIONS

Depressed fractures may involve either the outer table alone or the two tables conjointly. In the former condition, unless there are other associated superficial cranial or cerebral symptoms or signs present that warrant surgical or operative intervention, it is advisable to treat the patient symptomatically.

Before we proceed to discuss any of the many complications that may ensue, let it be understood from the start that any patient in shock is not to be disturbed for any reason whatever, but that all efforts are to be bent toward combating the shock. Rest in bed in the Trendelenburg position, hot water bottles and heated blankets, morphin for restlessness, the rectal drip with glucose, saline or Ringer's solution, blood transfusion or intravenous infusion of glucose or Ringer's solution, depending on the severity of the shock, are the only measures permissible and indicated. After the patient recovers from that initial exhausted condition, examinations of various kinds are the routine procedure.

* Read before the meeting of the Erie R. R. Surgeons' Association, New York, Oct. 8, 1925.

If a hematoma has accumulated over the depressed fracture of the outer table, aspiration of the blood should first be attempted, and if that is unsuccessful, incision and evacuation of the clot is indicated. Blood, whether in fluid form or in coagulation, is an excellent culture medium for the development and propagation of bacteria. Infection in this locality is conducive toward the production of osteomyelitis, meningitis or intracranial abscess. The prognosis of such a group of possible complications is very often fatal as far as life is concerned or, if life is spared, is very detrimental for an ultimate, uneventful return to normality. If, however, an infection has been superimposed either through a lacerated scalp as a portal of entry or through an improperly treated subcutaneous hematoma overlying and accompanying the depressed fracture, the traumatized area should be widely incised, the fractured fragments of the outer table removed, and the wound drained as an infection in any other site would be. Should an osteomyelitis supervene, both tables of the calvarium must be removed in spite of the fact that the outer table alone is fractured. It is advisable to remove all the bone for several centimeters outside the infected area.

When the inner table is depressed along with the outer one, the depressed bone must be removed regardless of whether the site of trauma is clean or infected. The incision in the scalp should be made through the clean field and if, infection being present, it is necessary to make a flap of scalp in order to approach the depression through a clean site, then the flap method should be utilized; a most convenient flap in this situation is a horseshoe flap. The infected portion of scalp can be excised before the flap is returned and sutured. Failure to elevate or remove the clean depression may be the cause of future localized adhesions, chronic encysted subdural hemorrhage, general increased intracranial pressure, post-traumatic epilepsy or psychosis, or bone neoplasm; the latter, although perhaps a remote and hypothetic possibility, is of sufficient importance to warrant consideration.

In dealing with this type of fracture, it is essential to determine the presence or absence of cerebral edema and intracranial hemorrhage before resorting to operative measures. If the former condition is associated with the initial depressed fracture, medical treatment should be instituted toward the reduction or eradication of the cerebral compression. The treatment of the depressed area can be deferred until the nonoperative measures directed toward the elimination of the increased intracranial pressure have been tried and their results determined. If the medical therapy has removed the complicating cerebral edema, we are then at liberty to deal operatively with the depressed site. If the brain edema persists in spite of the nonsurgical therapeutics employed, a subtemporal decompression must be performed preceding the removal of the depressed fracture; otherwise the brain is very likely to herniate through the opening in the skull made by the removal of the depressed fracture before the increased intracranial pressure has been relieved and has thus created irreparable damage to brain tissue. Both procedures can be completed at one sitting.

If intracranial hemorrhage complicates the picture, its removal is first attempted by means of repeated lumbar punctures; and if that fails, or if it is felt that the middle meningeal artery has been lacerated or that an extradural or subdural hemorrhagic clot has accumulated, cranial drainage by means of a subtemporal decompression and ligation of the artery in question is indicated.

If infection supervenes, the usual drainage for pus is instituted as elsewhere in addition to treating the primary complaint.

LINEA FRACTURE OF THE VAULT AND ITS COMPLICATIONS

Persons sustaining cerebral injuries more serious than that of concussion are more fortunate than not if a linea fracture of the vault of the skull accompanies their brain trauma. The severer forms of brain injuries lead to cerebral and medullary edema. With an intact calvarium there are no natural outlets sufficient to drain the edema satisfactorily, and the death of the patient is generally the outcome, especially if medullary edema has occurred. A linea fracture is an additional avenue for the escape of the excess cerebrospinal fluid, and cerebral compression may be avoided. A linea fracture acts in a limited manner as a decompressive measure and very often is sufficient to overcome the cerebral compression to the degree of obviating any operative intervention. Should the intracranial pressure increase in spite of the drainage afforded by the fracture, a subtemporal decompression must be performed.

The treatment of the linea fracture requires no especial attention aside from rest in bed and careful watchfulness for any of the possible associated complications that may arise.

Intracranial hemorrhage, cerebral edema, cerebral injury and infection will be discussed in separate paragraphs.

FRACTURES OF THE BASE

Fractures of the base are usually through the middle fossa, although the anterior and posterior fossa are at times involved. An extension of the line of fracture into the cribriform plate may produce a cerebrospinal rhinorrhea which may last a varying period of time. A posterior fracture is very apt to lead to a rapidly forming medullary compression necessitating a suboccipital decompression, which should be performed before the onset of a medullary edema which, in most instances, signifies the termination of life. Fractures through the middle fossa, the most common type, may have injuries to the facial and auditory nerves associated with them. Both may be involved as a result of an edema existing in the facial and auditory canals or as a result of a direct trauma to those nerves, caused by the line of fracture passing through those canals. The involvement of those nerves may be transient or permanent. Intracranial hemorrhage is in most instances found in the fluid removed at lumbar puncture, and the severity of the extravasation of the blood varies, depending on whether the middle meningeal artery has been injured, a cerebral vessel torn or whether small tributaries have been ruptured in the laceration of the dura.

No treatment is applied directly to the basal fracture itself, but any one of these many complications may require drastic and immediate attention.

INTRACRANIAL HEMORRAGE

Intracranial hemorrhage may be extradural, subdural, subarachnoid or intracerebral. In extradural hemorrhage the middle meningeal artery is usually the source of the trouble, and a proper cranial exposure must be made to ligate the vessel and remove the clot. Subdural hemorrhages result either from an injury to

the meningeal artery or from the rupture of the pial vessels with a laceration of the arachnoidal membrane, permitting the bloody extravasation to enter the subdural space. Chronic subdural hematomas,[1] resulting from such bleeding, are very often overlooked at the time of the initial injury because of the triviality of the trauma or because of the neglected cranial drainage. Within a period of weeks or months and even, in a few rare instances, years,[1] this condition gradually produces cerebral compression. The symptoms, often occurring weeks or months following an insignificant and forgotten cranial injury, may at first lead us to suspect that the person is a neurotic. It is only after careful observation and thorough neurologic examinations that the true nature of the situation is detected. This particular pathologic state must be constantly borne in mind, especially by railroad surgeons. It is an important diagnosis for us to be able to make early in order that proper treatment may be rendered as soon as possible so that the permanent residuals of such a condition may be obviated or, at least, lessened. Intracerebral hemorrhages create permanent and irreparable damage. They are due to injuries to the cerebral vessels.

Hemorrhages in the acute stage are intrathecal and very frequently are demonstrable at lumbar puncture. Drainage of the nonprogressive hemorrhage should at first be attempted by means of repeated spinal punctures performed daily or even oftener, depending on the severity of the hemorrhage. If the signs of cerebral compression supervene in spite of the lumbar drainage with the removal of bloody cerebrospinal fluid, or if the percentage consistency of the blood in the cerebrospinal fluid fails to decrease daily with repeated lumbar punctures, cranial exploration and cranial drainage are compulsory to control the bleeding and to evacuate the clot. If repeated spinal drainage suffices to remove the hemorrhage and no increase in the intracranial pressure is evinced, then further intervention is contraindicated with the exception of observation with the patient in bed.

CEREBRAL EDEMA

The treatment of brain edema has made startling advances in the last decade. Not alone that but also the determination [2] and detection [3] of the gradual increasing intracranial pressure has been so simplified that it is within the reach of every surgeon to measure accurately the degree of cerebral compression. The spinal mercurial manometer should be one of the most important diagnostic instruments in the armamentarium of the neurosurgeon in doing acute traumatic craniocerebral work. This instrument is more delicate, more accurate and earlier as well as more reliable in discerning increases in intracranial pressure than the ophthalmoscope. Surgeons engaged in this particular field of work should become more familiarized with the apparatus, and its utilization early in every case may very often be not only the cause of saving life but also of returning the injured to economic and emotional normality.

Many new measures have been introduced with which we are now much better fitted to combat and often overcome this dreaded cerebral edema. With the introduction of dehydrating fluids, experimentally supported by clinical usage with good results, we have been equipped with another life saving remedy. The most important of these are hypertonic sodium chlorid (15 to 30 per cent.) solution, hypertonic Ringer's solution and concentrated glucose solution (50 to 100 per cent.) intravenously, sodium sulphate, magnesium sulphate and sodium chlorid by mouth and magnesium sulphate by rectum in the form of high enemas. The literature has become too abundant on this subject to discuss it in detail in this paper. What I shall attempt to do will be to present the safest and most conservative measures that are employed at present.

Magnesium sulphate in concentrated solution is best given by rectal enema every four hours; this is productive of the best results in one hour and does not cause any initial rise in intracranial pressure, which all intravenous solutions, without exception, do. This method of administration is also free from any toxic effects as it is nondialyzable [4] and cannot, therefore, enter the blood stream. Concentrated glucose given intravenously is nontoxic and can be used in large quantities as well as rapidly given. Its effect is also very marked in the reduction of increased intracranial pressure which persists for a very long time, although it has the disadvantageous feature of all intravenous procedures; namely, the production of an initial rise in pressure. Intravenous sodium chlorid solution is being discarded more each day, as it possesses many disagreeable possibilities. First, it is toxic [5] and may produce a secondary brain edema [4] which is apt to become permanent; second, it produces an initial rise in pressure which is most undesirable; and, last, it is apt to exacerbate cardiac and respiratory difficulties. Naturally, it cannot be employed in known cases of nephritis. It must be said for salt, however, that it is a powerful dehydrating agent. To sum up the salt treatment, we may safely say that magnesium sulphate given rectally is the advisable drug to use.

Repeated lumbar puncture as a means of lowering increased intracranial pressure is not at all a new procedure and is still one of our helpful and successful methods. If this treatment in itself is insufficient to overcome the cerebral compression, it may be used to supplement the Epsom salt. The two can very easily and profitably be employed together. The manner in which repeated spinal drainage should be utilized is that with cerebral edema existing, the manometric pressure should be taken and sufficient cerebrospinal fluid removed to lower the pressure one half of what it was at the start.

Depending on the rapidity of the reformation of the cerebrospinal fluid and on the severity of the returning signs of compression will the time interval and frequency between lumbar punctures be best judged. Repeated spinal punctures will therefore be performed every six to twenty-four hours. At each lumbar tap enough cerebrospinal fluid is withdrawn to lessen the pressure to just one half; this is continued until the normal is ascertained. As mentioned previously, Epsom salt by rectum may be used in conjunction to facilitate and hasten the return to normal. When the combined efforts of repeated lumbar punctures plus the vigorous salt dehydration fail to secure desirable

1. Putnam, T. J., and Cushing, Harvey: Chronic Subdural Hematoma, Arch. Surg. **11**: 329 (Sept.) 1925.
2. Maclaire, A. S.: Intracranial Pressure: Its Determination and Significance in Neurosurgical Conditions, M. J. & Record **119**: 85 (April 16) 1924.
3. Maclaire, A. S.: The Significance of the Spinal Mercurial Manometer, New York M. J. **118**: 367 (Sept. 19) 1923.
4. Fay, Temple: Administration of Hypertonic Salt Solution for Relief of Intracranial Pressure, J. A. M. A. **80**: 1445 (May 19) 1923.
5. Peet, M. M.: Reduction of Increased Intracranial Pressure, J. A. M. A. **84**: 1994 (June 27) 1925.

results, decompression must be resorted to. In cases of cerebral edema, either a unilateral or a bilateral subtemporal decompression is absolutely essential. In those cases in which medullary compression has occurred, it would be advisable to perform cisterna magna punctures, withdrawing the fluid with very careful attention to the character and nature of the pulse and respiration. Rand and Nielsen [6] employed this means on two moribund patients without any success. They warn against the dangers that may result from such a procedure. Although I have not had the opportunity of performing the cisterna puncture in any such case, yet theoretically I feel that the sudden deaths that occur from the too sudden release of fluid from the cisterna cerebellomedullaris can be safely avoided if the patient should be placed in the Trendelenburg position during the entire performance of the act. If this suggested treatment should result favorably in the future, it will give the patient just one more chance to be in better condition for operation. When medullary compression has supervened in a traumatic injury, suboccipital decompression is the only real therapeutic measure left at our disposal; and if, by cisterna punctures, we can alleviate the compression sufficiently to improve the patient's condition for operation, I feel that it should be tried. If the stage of medullary edema has been entered, almost everything will be futile; yet cisterna punctures should be performed in the hope, rather than the expectation, that the patient may sufficiently rally from that state to make the operation a possible rather than a probable success. When medullary edema persists in spite of all treatment, operation is absolutely contraindicated.

CEREBRAL DAMAGE

When contusion and laceration of the brain have occurred, there is nothing to advocate for those injuries directly except cleansing the field of the accompanying hemorrhagic clots and permitting drainage for any postoperative oozing or edema that might occur, as all the nerve tissue injury is permanent. The lesions themselves must be left to nature to repair in her own way. The resultant scar tissue may either be the cause of future epilepsy or may not give rise to any symptoms whatever.

INFECTION

If the calvarium adjacent to the fracture or underlying an infected scalp becomes itself infected to the degree of an osteomyelitis, it must be removed entirely and the site drained. If the infection has proceeded deeper and involved the brain to the extent of the development of a brain abscess, evacuation of the pus and drainage through a clean field must be immediately instituted. Brain abscess complicating craniocerebral injuries carries with it as high a mortality as brain abscess due to any other cause. The warning should be in the prophylaxis to attempt to prevent the formation of an abscess as far as possible by properly treating the scalp and any hemorrhage that may occur in the subcutaneous tissues. The hematogenously borne cerebral abscesses are not preventable and are not due to any fault or negligence on the part of the surgeon.

CONCLUSIONS

1. Skull fractures in themselves are not fatal; it is the accompanying complications that render these cases so disastrous.

2. Head injuries, if severe, have a more favorable prognosis if a linea fracture of the vault is present to assist, as far as possible, in the prevention of the formation of cerebral edema.

3. Hematomas of the scalp overlying fractures should be evacuated to prevent infection.

4. Intracranial hemorrhage should be drained either by repeated lumbar punctures or, if that fails, by cranial drainage.

5. Cerebral edema is best treated by dehydration, with epsom salt by rectum, repeated lumbar punctures and subtemporal or suboccipital decompression as the occasion may demand.

6. The spinal mercurial manometer and its interpretation are absolutely essential to determine the accurate degree of intracranial pressure.

7. Operation is contraindicated in shock and medullary edema.

8. Contusion and laceration of the brain are healed by nature.

9. Osteomyelitic bone must be removed.

10. Brain abscess must be drained through a clean field.

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6. Rand, C. W., and Nielsen, J. M.: Fracture of the Skull, Arch. Surg. **11**: 434 (Sept.) 1925.

NARCOLEPSY OCCASIONALLY A POST-ENCEPHALITIC SYNDROME *

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Since Gélineau described narcolepsy in 1880, the recognition of this disorder as a distinct entity has been much disputed. By some it has been considered a symptom-complex occurring with epilepsy or hysteria.

In narcolepsy the patient not only drops off to sleep at frequent and often at most inopportune times, but also he may experience a sudden feeling of weakness, even paralysis, from emotional disturbance, especially laughter, and the lower limbs may give way beneath him. This has been described as the cataleptic paralysis of Henneberg or as blockage of tonus. There is also a persistent muscular asthenia which is present even after the night's sleep. The patient may go to sleep while walking in the street or eating, or even when his position may expose him to great danger of death, as in case 2, in which a locomotive fireman would fall asleep while holding to the grabirons by which he climbed on to the locomotive and while it was going, as he stated, at a speed of about 70 miles an hour. In some instances, shaking or pinching will arouse the sleeper. The sleep appears to be natural, and there may be dreaming, usually of an anxious character.

Even in normal persons great emotion, such as joy and especially fear, may cause a feeling of weakness. We speak of being "paralyzed by fear," or we may hear some one say that he "laughed until he was weak." This fear paralysis is seen in animals, as when a small animal is unable to escape from an approaching snake. In narcolepsy the cause of the weakness may be trivial, as the meeting with strangers, or even friends. Mental and physical rest may in some instances lessen the severity of the attacks, but one of my patients found that he had the same tendency to drop off to sleep after he had slept twelve hours at night.

* Read before the Philadelphia Neurological Society, Nov. 20, 1925.

Cases of typical narcolepsy following an attack of epidemic encephalitis are rare, but Redlich remarks that some cases have been reported in which, following an attack of epidemic encephalitis, short attacks of sleep occurred several times daily, which disappeared after a few weeks. He had described such a case previously, and recently he observed a case in which epidemic encephalitis occurred in 1920 and was followed by a paralysis agitans syndrome and typical narcoleptic attacks persisting a long time, until treatment in a hospital apparently effected a cure. He refers to a similar case reported by Stiefler. Another reported by Siebert seemed to follow grip rather than encephalitis.

Stefano Perrier[1] has reported two typical cases in which narcolepsy occurred soon after an acute attack of epidemic encephalitis, with as many as twenty or thirty attacks in a day, and in one of these cases the patient, a soldier, went to sleep while on guard. These two cases presented no other sequel of encephalitis.

Narcolepsy has usually been regarded as a very rare condition, although Redlich[2] has recently reported eleven cases observed by him, seven of which occurred since the recent war, and he remarks that narcolepsy no longer can be regarded as an extreme rarity. A few years ago it was exceptional for a neurologist even with a large experience to see a case of typical narcolepsy. I have been impressed by the fact that at least three cases have come under my observation within a year, and about a year ago I received a request to diagnose a typical case described to me in a letter. In none of my three cases has a clear connection with epidemic encephalitis been established, as Redlich and Perrier were able to do. In case 2 the history of an attack of influenza in 1918 and of diplopia at some uncertain time, apparently in connection with the onset of the attacks of sleep, is very suggestive of epidemic encephalitis, and it is to be recalled that in the two cases reported by Perrier in which the connection with encephalitis seemed well established, nothing beyond the narcolepsy indicated a previous encephalitis.

It would be assuming too much to assert that narcolepsy is always a postencephalitic syndrome, but it seems desirable to recognize that it may occasionally be such a syndrome and to be alert for it, especially since Redlich holds out hope of recovery in such cases. It is interesting that in cases 2 and 3 the sleep at night was interrupted, suggesting the inversion of sleep from night to day frequently observed in epidemic encephalitis.

REPORT OF CASES

CASE 1.—J. M., a man, aged 28, who came to the dispensary for nervous diseases of the University Hospital only once, Sept. 22, 1924, had been complaining of sleeping excessively for a year and stated that the condition was getting worse. He would go to sleep while working on a scaffold or while eating. He had tried going to bed early so as to obtain twelve hours of sleep at night, but this did not prevent him from sleeping during the daytime. The only time he was confined to bed for sickness was in 1917, when he had an acute respiratory affection, possibly pneumonia. The blood Wassermann reaction was negative. When he became drowsy he frequently felt weak in the knees, as if they might give way under him. Sometimes he felt weak all over, and then he found it difficult to walk, especially in gunning for reedbirds. The excitement of gunning probably assisted in the production of weakness.

CASE 2.—H. L. J., a man, aged 22, came to consult me, July 2, 1925, referred by Dr. William H. Speer of Wilmington, Del. He was somewhat uncertain as to the onset of his symptoms, but he said he was perfectly well until three or four years previously. About that time, while on a vacation, he noticed that when he laughed he became so weak he would fall down. At that time, or possibly earlier, he had diplopia. He gave no history of an acute disease, but said he had had influenza in 1918. About the time that he noticed the weakness after laughing he became drowsy, and the drowsiness has continued until the present time, without modification. When he was under my observation, he slept a great deal. I found him asleep while he was in my office waiting to see me, in the morning. He was asleep when I came to examine him in the hospital at 9 o'clock in the morning. He said he felt tired and weak when he arose. When he bathed at a public beach he would feel weak, because of the association with other people. Sometimes when he met a friend on the street unexpectedly he would become very weak, and he has fallen often when he had these sudden attacks of weakness. He has gone to sleep while holding on to the grabirons of a train said to be moving at a speed of about 70 miles an hour. He is a fireman on a locomotive. He has gone to sleep while driving an automobile, but still drives one. He has continued as a fireman, and on every run during the last three or four years he has fallen asleep three of four times, in a trip lasting from eight to twelve hours. He has often gone to sleep while standing in a room full of people talking, or he has fallen asleep while eating, and his head has dropped into his plate. He has fallen out of a canoe while sleeping. He has not slept soundly at night.

He described his dreams at night as frightful, and usually some one seemed to be attempting to injure him. When his drowsiness began he was getting little sleep in the twenty-four hours.

He was a powerfully developed man physically, and apart from the symptoms mentioned I could find nothing abnormal; he had no signs of a previous encephalitis other than the narcolepsy. The blood Wassermann reaction was negative.

CASE 3.—P. M., a boy, aged 15 years, who came into my service at the University Hospital, Sept. 28, 1925, began to have sleeping attacks in February, 1925. He would fall asleep any time of the day regardless of what he was doing, when eating, walking or driving a car. The attacks would come suddenly and he would sleep from ten to fifteen minutes. He has never fallen during an attack, as he is awakened immediately if he begins to fall. His sleep at night has been interrupted. The attacks of sleeping in this case are not so severe as in many cases of narcolepsy, and while he was in the hospital he usually was found awake. I felt that he was improving.

When he laughed heartily or became angry, he felt weak in his lower limbs, as if his knees would give way under him. He had no other signs of disease, and no history suggesting epidemic encephalitis could be obtained.

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1. Perrier, Stephano: Les narcolepsies postencéphalitiques, Rev. neurol. **1**: 1056 (June) 1925.
2. Redlich: Ueber Narkolepsie, Ztschr. f. d. ges. Neurol. u. Psychiat. **95**: 256, 1925.

Chinese Medical Sayings and Proverbs.—1. The "superior man," if disinclined for official life, will practice medicine (for the doctor also can serve the people). 2. A good doctor is equal to a good premier. 3. If I cannot aspire to be a good statesman I will be a good doctor. 4. One who serves one's parents should not be ignorant of medicine. 5. The doctor controls life and death. 6. Only the healing art enables one to make a name for himself and at the same time give benefits to others. 7. Mathematicians, surveyors, fortune tellers, physiognomists, physicians and magicians were charlatans. The sages did not regard them as educated. 8. Priests and doctors employed poisonous drugs to drive and expel disease; hence the ancients despised them and assigned them a low position in society. 9. Sun Szu-miao was a noted doctor of literature of the Tang dynasty. But as he took up medicine as a profession he was relegated to the class of artisan. What a pity! 10. Medicine is one of the nine low trades.—*China M. J.* **39**:1099 (Dec.) 1925.

MIGRAINE WITH ABDOMINAL EQUIVALENT

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In a previous communication,[1] a series of twenty-two cases of migraine was reported in which the abdominal symptoms dominated the clinical picture. Great care was used to exclude organic disease of the nervous and other systems by physical examination and other tests and by prolonged observation in many instances for a number of years. It was also pointed out that, with the exception of the few cases reported by Moebius,[2] Schmidt,[3] Ortner,[4] Kuttner,[5] Bary,[6] Mendel,[7] Curschmann,[8] and Bordoni,[9] comparatively little mention is made in the literature of migraine cases in which the abdominal symptoms replaced the hemicrania or greatly overshadowed the headache. The exhaustive monographs of Liveing[10] and Flatau[11] give only scant mention to the form of migraine under discussion. A study of the literature since the date of our previous publication reveals only two additional reports on migraine with pronounced abdominal phenomena—one by Buchanan[12] and another by McVicar.[13]

This scarcity of the literature describing the form of migraine under discussion is probably one of the reasons why the condition is not recognized more frequently, and why migraine with pronounced abdominal symptoms has been mistaken for attacks of gallstone colic, gastric ulcer and various other conditions for which operation has sometimes been needlessly performed. Our experience with ten additional cases, in which five patients were operated on without anything abnormal being found anatomically, prompts us to report these cases somewhat in detail, in order to emphasize certain features that may be of value in the diagnosis of this condition. The same care was taken in these ten cases as in our previous series to exclude organic disease of the nervous system or in other parts of the body.

REPORT OF CASES

CASE 1.—A man, aged 33, whose father had severe migraine since early childhood, whose mother was very nervous, and who had one brother and three sisters that had had definite attacks of migraine, began at 14 to have attacks of frontal headaches, occurring on either side but more often on the left, and accompanied by scotomas, nausea and occasionally by vomiting. The attacks would last several hours or a day and would occur perhaps once in two months. Sleep produced relief. When the patient reached the age of 21, the headaches became less severe, but the nausea and vomiting were more pronounced; when he was about 25, the headache disappeared almost completely. The attacks now consisted of severe pain in the epigastrium and right hypochondrium, irrespective of the type of food eaten. Abdominal tenderness, nausea, eructations and vomiting accompanied the attack, which lasted almost four days and which was relieved by sleep. The attacks occurred nearly every six weeks, and there was complete freedom from symptoms in the intervals. A diagnosis of gastric ulcer was made, and the patient was placed on ulcer management three times during the next three years. Nothing abnormal was found as a result of test meals or fluoroscopic examination, but the attacks became more severe. An exploratory operation was then performed but nothing abnormal was found. The patient has since been on cannabis medication, with considerable improvement, so that he now has only an occasional attack.

CASE 2.—A woman, aged 46, whose mother, father, one sister and two brothers had had migraine, had suffered from it since she began to menstruate at the age of 13. The attacks were typical until five years before I saw her, when the headache became less severe. About three years before, the patient began to have attacks of abdominal pain, with nausea and vomiting, lasting approximately three days and occurring about every two weeks. Nothing abnormal was found on physical examination, but the attacks were so severe that a diagnosis of hepatic colic was made and an exploratory operation performed. Nothing abnormal was found, and the attacks became much worse in the two years following the operation. She was given tincture of cannabis, 5 minims (0.3 cc.) three times a day, and this was increased 1 minim (0.06 cc.) per dose daily until the point of intoxication was reached, when the dose was decreased by 15 minims (0.9 cc.) and again increased gradually as before. The attacks now occur about once in four months and are very much less severe than formerly.

CASE 3.—A man, aged 42, whose mother had painful attacks of head migraine with frequent abdominal attacks similar to those complained of by the patient, began, at the age of 20, to have attacks of severe abdominal pain with nausea and vomiting, lasting from one to one and a half days. Food had apparently no effect on the pain, but relief was obtained at night. A slight dull headache with blurring of vision occasionally accompanied the abdominal pain. The attacks occurred about once in four months at first, but, when the patient was 40, they became very severe and occurred every two or four weeks. Examination revealed nothing abnormal except a diminution of the hydrochloric acid in the stomach contents. A diagnosis of gallstones was made and an exploratory operation was performed, at which nothing abnormal was found, but the gallbladder was removed. The attacks continued after the operation, but the patient has been taking cannabis for the last eight months with the result that he has had only two mild attacks during this time, each lasting but a few hours.

CASE 4.—A woman, aged 45, whose father, brother and sister had attacks of migraine, had had typical migraine since the age of 14. The attacks occurred once in three or four months, lasted several days and were always relieved by sleep. The headache became less noticeable when the patient was 22, a few months after marriage, but the nausea and vomiting became more severe and more frequent and were associated with epigastric pain, which lasted several days. When the patient was between 22 and 35, the abdominal pains became even more severe, so that a diagnosis of gallstones was made and an exploratory operation was performed. Nothing abnormal was found and the attacks continued with the same severity until the age of 43, at which time she had her menopause. The attacks are now less severe and occur at longer intervals.

CASE 5.—A woman, aged 46, whose mother and two sisters had migraine, at the onset of her menses began to have attacks of severe frontal migraine with slight nausea and infrequent vomiting, but no abdominal pain. The attacks frequently occurred between menses as well as during the menstrual periods and gradually became much worse, until the patient was 18, at which time the headaches rather suddenly became much less severe, but the nausea and vomiting increased. Very painful abdominal cramps with some tenderness now occurred during the attacks, which lasted two or three days, but the headaches disappeared after one day.

1. Brams, W. A.: Abdominal Migraine, J. A. M. A. **78**: 26 (Jan. 7) 1922.
2. Moebius, in Nothnagel's Spezielle Pathologie, Vienna, A. Hölder, **12**, part 2.
3. Schmidt, A.: Med. Klin. **7**: 1932, 1911.
4. Ortner, N.: Klinische Symptomatologie der innerer Krankheiten, Vienna, Urban and Schwarzenburg, 1920.
5. Kuttner, L.: Med. Klin. **8**, no. 20.
6. Bary, A.: Neurol. Zentralbl. **14**: 251, 1895.
7. Mendel, E.: Deutsch. med. Wchnschr. **32**: 785, 1906.
8. Curschmann, H.: München. med. Wchnschr. **68**: 745, 1921.
9. Bordoni, L.: Rif. Med. **14**: 100, 1898.
10. Liveing, Robert: Migraine: Sick Headache and Some Allied Disorders, London, 1873.
11. Flatau, E., in Lewandowsky's Handbuch der Neurologie, Berlin, Julius Springer, 1914.
12. Buchanan, J. A.: J. Nerv. & Ment. Dis. **54**: 406 (Nov.) 1921.
13. McVicar, C. S.: J. Iowa M. Soc. **14**: 244 (June) 1924.

CASE 6.—A man, aged 39, whose mother and one brother had attacks of severe migraine, complained of attacks of very painful bilateral frontal headache with scotomas and some nausea, but no vomiting. The attacks began at the age of 16, and when the patient was 22, the headaches became less severe, but marked abdominal pain with nausea and vomiting now occurred during attacks. Although no headache has been present in the last three years, the attacks of abdominal pain and nausea have not been amenable to any form of treatment.

CASE 7.—A woman, aged 43, whose father, brother and sister had attacks of migraine, at the age of 16 began to have attacks of typical hemicrania with nausea, vomiting and generalized abdominal pain, especially if the attack occurred just before menstruation. When the patient was 32, the abdominal symptoms became very much worse, while the headaches were less severe, and when she was 36, the hemicrania disappeared entirely, while the abdominal symptoms became aggravated. Nothing abnormal was found on repeated examination of the patient. The attacks occurred about every two months, and when the patient was 38, the headaches began to recur, while the abdominal pain became better. When the patient reached the age of 40, both the headache and abdominal pain became less severe and she has been free from symptoms for the last eighteen months.

CASE 8.—A man, aged 32, whose mother had migraine together with marked abdominal symptoms and whose sister suffered from hemicrania, at the age of 16, without previously showing any evidence of migraine, began to have attacks of severe abdominal pain with retching, eructations and vomiting. These increased in severity so that a diagnosis of gallstones and ulcer was made. At the age of 28, he was placed on a rigid ulcer regimen, although gastro-intestinal examination was negative. No improvement followed. When he was 30, laparotomy was performed but nothing abnormal was found. A diagnosis of gastric neurosis was then made. The patient was placed on antimigrainous treatment, with the result that he had only two attacks during the past year.

CASE 9.—A woman, aged 34, who complained of periodic attacks of very severe pain in the abdomen which were uninfluenced by food, alkalis or vomiting, felt in particularly good health just before an attack and had no symptoms in the interval between attacks. Vomiting of bile and mucus occurred several hours after the abdominal pain, and the entire attack lasted two or three days. The patient had been suffering from this trouble for almost ten years. The attacks occurred two or three times a month and were ushered in by a feeling of burning and tingling in both legs several hours before the headache began. The abdominal pain began about an hour after the headache occurred, and nothing relieved it. Nothing abnormal was found on examination of the patient except slight surging in the duodenum, revealed by the roentgen ray. The Wassermann reaction was negative, and the fundi were normal. Determination of the nonprotein nitrogen, urea, creatinine and calcium content of the blood before, during and after an attack revealed nothing abnormal. The patient stated that her mother suffered from migraine but that no other member of her family showed evidences of this condition. There was no history of epilepsy or insanity in the family. The patient was put on various forms of treatment, including cannabis, but obtained no marked relief.

CASE 10.—A woman, aged 27, whose father and paternal grandmother had typical attacks of migraine, the latter with severe abdominal symptoms, began to have attacks of painful bilateral frontal headaches, with blurring of vision and severe nausea, but with no vomiting, at the age of 8. Until she was 13, the attacks would occur once in from four to six weeks with more or less regularity. With the onset of the menses at the age of 14, the attacks became more frequent and when the patient was 18, the attacks occurred almost every two weeks. The headaches at this time were less severe but were accompanied by marked abdominal pain and tenderness, and vomiting lasting nearly three days. The severity of the head pain was diminished after sleep, but the other symptoms persisted until the attack was over. Physical examination revealed nothing abnormal, and the patient was placed on treatment with cannabis, as previously outlined.

COMMENT

A study of the foregoing cases as well as of the series previously reported brings several interesting features to our attention. There was a family history of migraine in nearly every patient, and several of the patients themselves suffered from hemicrania either before or at the time the abdominal pain occurred. The attacks usually began abruptly, lasted from one to four days, and ended as abruptly as they began. The intervals between attacks were remarkable in that there was a complete absence of all symptoms. The typical attack consisted of a severe, boring or cutting epigastralgia, without relation to food and without relief by alkalis, food or vomiting. Physical examination during an attack showed nothing abnormal except slight epigastric tenderness in a few cases. An important negative sign was the absence of fever during an attack. A remarkable feature in the first eight cases reported in our later series and in some of the previous cases was the disappearance of the hemicrania and the substitution of the epigastralgia for this symptom during an attack of migraine.

In considering the diagnosis of an abdominal crisis in migraine, great care must be used to exclude organic disease of a different nature, especially the abdominal crises of tabes and exophthalmic goiter. Reflex pain from disease of various organs must also be considered. The condition described by Grasset,[14] and named by him nervopathie psychosplanchnique, in which visceral nervous symptoms occur with psychic manifestations, must be kept in mind. Vorkastner [15] described a condition in which psychic disturbance or mental excitement was associated with abdominal pain, but this condition should be recognized with ease.

In the pathogenesis of migraine we must consider a constitutional and usually an inherited diathesis independent of any apparent abnormality in the structure of the brain. The abnormality is functional. The nature of this constitutional element has never been satisfactorily explained by any theory. It would seem that under certain conditions certain parts of the brain have an inherent tendency to become a storm center, as in epilepsy when the cortex or bulb is involved. In migraine it is difficult to define an exact cerebral localization, since the symptoms are referable to many parts of the body, as described by Hurst [16] and Liveing.[10] It is possible, however, that the abdominal pain and other symptoms mentioned in our series of cases may be due to the occurrence of a storm center involving the region of the nuclei of the vagi, with transmission of the impulse to the sympathetic system.

SUMMARY

1. In a series of thirty-two cases of migraine, abdominal pain was the outstanding symptom in the clinical picture.

2. The abdominal pain occurred in periodic attacks similar to the attacks of hemicrania in the ordinary form of migraine.

3. The occurrence of the periodic attacks of abdominal pain, after the paroxysms of hemicrania were greatly diminished or disappeared completely, leads us

14. Grasset: L'encéphale 4: 194, 1909.
15. Vorkastner, W., in Lewandowsky's Handbuch der Neurologie, Berlin, Julius Springer, 1914, p. 75.
16. Hurst, A. F.: Lancet 2: 1 (July 5) 1924.

to conclude that the abdominal pain may be regarded as a substitute for the attacks of headache which were previously present in these cases. This supposition is strengthened by the fact that the abdominal pain again disappeared in several cases when the hemicrania recurred.

4. Great care must be taken not to confuse organic disease of the nervous system or reflex pain with the condition described.

5. The outstanding features of the condition described are periodic attacks of severe abdominal pain, with normal intervals, in a person who has a personal or family history of typical migraine. The attacks resemble very closely the ordinary attacks of migrainous hemicrania, except that abdominal pain occurs instead of headache. Practically all associated symptoms of migraine occurred with the abdominal pain in our series. The fact that four of the ten patients reported in our series were operated on and nothing was found to explain the attacks strengthens our belief that these were cases of atypical migraine.

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THE RÔLE OF DENTITION IN THE DIAGNOSIS OF RICKETS*

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NEW HAVEN, CONN.

This investigation is concerned with the relationship of dentition to the mild type of rickets and is based on data that have served for studies on rickets by Hess and his co-workers during the last few years. This form of the disorder usually passes unrecognized and is prevalent among infants both of the well-to-do and of the poor, in contradistinction to the marked type, which is almost limited to the poor. Fully 75 per cent of all artificially fed and perhaps 50 per cent of all breast fed infants manifest evidences of mild rickets some time during the first two years of life. It is a problem, therefore, which should interest the general practitioner.

A review of the literature of the rôle of dentition in rickets reveals surprisingly few clinical investigations and a striking paucity of data on which to base an opinion concerning this interesting aspect of a common nutritional disorder. The statements in this regard are many and have been reiterated ever since the conception of delayed dentition was first associated with rickets by Glisson in the seventeenth century. An idea of the status of the question may be gleaned from the following excerpts selected from standard textbooks of pediatrics of various countries: In considering dentition in rickets, Kassowitz [1] of Vienna says: "Generally as the result of the early beginning of rickets, the first teeth appear late: instead of at the middle of the first year, they appear toward the end or even later. Sometimes the first teeth appear on time or only slightly delayed; then comes a long pause which is concomitant with an increase in the degree of rickets." Heubner,[2] who always gave great attention to rickets, refers to "a delayed appearance of the deciduous teeth or of an interval of months in the appearance of different pairs of teeth." Turning to a French authority on this subject, we find that Marfan [3] writes: "Rickets frequently retards the eruption of the teeth: instead of appearing at seven, the first incisors do not erupt before about ten, twelve, or even fifteen months and even beyond that period." Still [4] sums up the question in these words: "The delay of dentition is a very frequent symptom and one of considerable value in diagnosis: it was noted in 76 per cent of my cases. The first tooth may not make its appearance until eighteen months, but it is exceptional to be as late as this." Holt and Howland [5] state that, "as a rule, dentition is late and apt to be difficult. A study of the progress of dentition in 150 rachitic children gave the following results: in 50 per cent, the first teeth were cut on or before the eighth month; 20 per cent of the patients had no teeth at twelve months, and in 8 per cent none had appeared at fifteen months. Even though the first teeth came at the usual time, the progress of dentition is usually retarded by the development of rickets." In his recent monograph on rickets, Hess [6] writes: "No doubt rachitic infants in general teethe later and more irregularly than the nonrachitic, a phenomenon which is especially marked in severe cases. In the mild cases, however, which constitute those commonly met with, this sign is fallacious. Family idiosyncrasy, mental backwardness and other causes will lead to delayed dentition quite in the absence of rickets."

An excellent opportunity has been afforded us in this institution to study the time of eruption of the first tooth as well as the progress of dentition during the development of rickets. This study includes a large number of infants with various grades of rickets, beginning several years ago in 1920, when cod liver oil was not used as a therapeutic agent, and extending to the present time, when it is prescribed in a routine way. Orange juice was given at all times, so that the possibility of scurvy as a factor in delayed dentition can be absolutely excluded. These children have been examined regularly at monthly intervals, and data of the clinical signs of rickets, roentgenograms of the epiphyses, and inorganic phosphorus determinations of the blood have been recorded. Although several hundred infants have been studied in this manner, only those which had no teeth at the time of the first examination have been included in this survey.

The time of eruption of the first tooth was observed in sixty-eight infants who had no rickets and in eighty-seven infants who had rickets of various degrees. The diagnosis was substantiated by beading of the ribs, bowing of the legs, enlargement of the epiphyses, typical roentgenologic changes, and the diminished inorganic phosphorus in the blood. As far as we are aware, there has been no similar study controlled in these various ways, which have enabled us not only to be certain in regard to the diagnosis of the various cases, but to include in the survey the important group of mild rickets which otherwise would have been open to question.

In contradistinction to the experience of others, as expressed in the textbooks on pediatrics, only slightly

* From the Home for Hebrew Infants.

1. Kassowitz, M.: Praktische Kinderheilkunde, Berlin, Julius Springer, 1910.
2. Huebner, O.: Lehrbuch der Kinderheilkunde, Leipzig, Johann Barth, 1903.
3. Marfan, P.: Maladies des os, Paris, J. B. Bailliere, 1912.
4. Still, G. F.: Common Disorders and Diseases of Childhood, London, Henry Froude, 1909.
5. Holt, L. E., and Howland, J.: The Diseases of Infancy and Childhood, New York, D. Appleton & Co., 1918.
6. Hess, A. F., in Abt's Pediatrics 2, Philadelphia, W. B. Saunders Company, 1923.

more than 10 per cent of the normal babies had a tooth at the age of 6 months. The first tooth in the group of infants with rickets did not appear until the seventh month, and even then was noted in only about 1 per cent. Thirty-five, or about one half, of the normal group had a first tooth during the period from the sixth to the ninth month, whereas twenty-three, or about one fourth, of the rachitic infants had a first tooth during this period. Forty-two infants having rickets, comprising about one-half the total number, gave no evidence of teething before the age of from 9 to 12 months. At the end of the first year of life, all but one of the normal babies had a tooth; whereas only sixty-five, or about 75 per cent, of the rachitic babies had a tooth. Teething was delayed until the twelfth to the fifteenth month in eighteen of the infants having rickets; until the fifteenth to the twenty-first month in four others. The data are portrayed in tables 1 and 2 and chart 1.

TABLE 1.—*Time of Appearance of First Tooth in Infants With and Without Rickets*

Age in Months	Number of Cases	
	Without Rickets	With Rickets
3	0	0
4	0	0
5	0	0
6	7	0
7	9	4
8	11	8
9	15	11
10	12	16
11	8	15
12	5	11
13	1	4
14	..	11
15	..	8
16	..	1
17	..	1
18	..	..
19	..	..
20	..	1
21	..	1
Total	68	87

TABLE 2.—*Time of Appearance of First Tooth (Quarterly Periods) in Infants With and Without Rickets*

Age in Months	Number of Cases	
	Without Rickets	With Rickets
0 to 6	7	0
6 to 9	35	23
9 to 12	25	42
12 to 15	1	18
15 to 21	0	4
Total	68	87

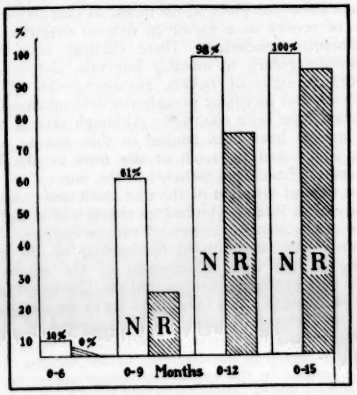

Chart 1.—Comparison of time of eruption of first tooth in series of rachitic and nonrachitic infants (percentages); *N*, normal infants; *R*, rachitic infants.

TABLE 3.—*Rachitic Cases*

Case	Date of Observation	Age, Months	Number of Teeth	Rosary	Phosphorus Inorganic, Mg. %	Roentgenographic Findings
8	2/27/22	7	0	Plus	3.83	Rickets ?
	3/28/22	8	2	Plus	3.50	Healing
	5/10/22	10	2	Plus	3.33	Moderate
	6/14/22	11	2	Plus	3.33	Marked
	7/16/22	12	2	Plus	....	Marked (healing)
	8/25/22	13½	7	Negative	....	Healed
12	3/24/22	10	0	Plus	3.03	Slight
	4/ 5/22	10½	1	Plus	3.03	Slight
	5/12/22	12	1	Plus	4.24	Healing
	6/13/22	13	2	Plus	4.24	Healing
13*	1/30/20	3½	0	Plus	....	Slight
	3/ 5/20	5	0	Plus	....	Slight
	4/ 4/20	6	0	Plus	....	Slight
	5/ 7/20	7	0	Plus	....	Slight
	6/ 8/20	8	0	Plus	....	Slight
	7/11/20	9	0	Plus	....	Slight
	7/27/20	9½	0	Plus	....	Slight
	9/ 2/20	11	0	Plus	....	Slight
	10/ 3/20	12	0	Negative	....	Slight
	11/ 5/20	13	0	Negative	....	Slight
	12/ 3/20	14	0	Negaitve	....	Slight
	1/ 9/21	15	0	Negative	....	Slight
	2/15/21	16	0	Negative	....	Slight
	3/18/21	17	0	Negative	....	Healing
	4/18/21	18	0	Negative	....	Healing
	5/27/21	19	1	Negative	....	Healing
	7/ 5/21	20½	3	Negative	....	Healing
14	11/18/21	8	0	Plus	....	Negative
	12/20/21	9	0	Plus	3.45	Negative
	1/18/22	10	0	Plus	3.31	Slight
	2/21/22	11	0	Plus	....	Slight
	3/24/22	12	0	Plus	3.23	Slight
	4/26/22	13	1	Plus	3.17	Slight
	5/ 3/22	13½	..	Plus	3.12	Mild
	8/24/22	17	4	Negative	4.13	Healing
15	8/16/21	9	0	Negative	....	Healing
	9/23/21	10	2	Negative	....	Mild
	10/28/21	11	2	Negative	....	Slight
	12/ 4/21	12½	4	Plus	3.33	Slight
	1/15/22	14	5	Plus	....	Slight
	2/28/22	15	7	Plus	3.22	Moderate
	3/29/22	16	8	Plus	2.77	Healing
	4/28/22	17	10	Plus	4.46	Almost healed
	5/30/22	18	12	Negative	4.42	Healed
16	10/ 6/20	9½	0	Plus	....	Negative
	11/ 2/20	10½	0	Plus	....	Slight
	11/30/20	11	2	Plus	....	Slight
	12/28/20	12	2	Plus	....	Moderate
	1/30/21	13	2	Plus	....	Moderate
	3/ 6/21	14½	2	Plus	....	Calcification
	4/12/21	15½	4	Plus	....	Healed
	5/13/21	16½	6	Negative	....	Healed
	6/19/21	18	7	Negative	....	Healed
	8/ 5/21	20	12	Negative	....	Negative
	9/ 6/21	21	12	Negative	....	Negative
19*	10/ 1/20	4	0	Plus	....	Slight
	10/31/20	5	0	Plus	....	Slight
	12/ 3/20	7	0	Plus	....	Slight
	1/ 9/21	8	0	Plus	....	Moderate
	2/ 4/21	9	0	Plus	....	Moderate
	3/ 6/21	10	0	Plus	....	Moderate
	4/10/21	11	0	Plus	....	Moderate
	5/11/21	12	0	Plus	....	Healing
	6/10/21	13	0	Plus	....	Healed
	7/ 8/21	14	0	Negative	....	Healed
	8/16/21	15	0	Negative	....	Healed
	9/16/21	16	0	Negative	....	Healed
	10/14/21	17	2	Negative	....	Healed
81	10/28/21	10	0	Negative	....	Negative
	12/ 4/21	11	2	Plus	3.95	Negative
	1/ 7/22	12	3	Plus	....	Negative
	2/21/22	13½	4	Plus	....	Negative
	3/24/22	14½	4	Plus	3.12	Mild
	4/26/22	15½	4	Plus	2.85	Mild
	5/ 3/22	16	5	Plus	2.85	Mild
86	10/28/21	4	0	Plus	....	Negative
	12/ 4/21	5	0	Plus	3.84	Negative
	1/ 8/22	6	0	Plus	3.80	Negative
	3/24/22	8½	0	Plus	3.03	Slight
	4/25/22	9½	1	Plus	3.22	Slight
	5/31/22	11	3	Plus	3.33	Moderate
	8/24/22	14	5	Negative	4.46	Healed

* In case 19, cod liver oil, one teaspoonful three times a day, was given continuously after February, 1921. In case 13 the same amount was given after May, 1920.

In order to give an adequate conception of the method by which this study was carried out, and the form in which the data were recorded, we are presenting two tables—one, reproducing data in connection with the normal cases and the other giving similar data in relation to the rachitic cases. It will be noted how, month by month, the eruption of the teeth was recorded together with the presence or absence of signs of early rickets. Cases showing delayed dentition in rickets may be found in table 3. Cases 19 and 13 of this series are excellent examples of delayed dentition, only two and three teeth, respectively, having erupted in the course of seventeen and twenty and one-half months. Cases 8 and 15 of this group illustrate the increase in the number of teeth after a period of delayed dentition coincident with the beginning of healing of the epiphyses and an increase in the inorganic phosphorus of the blood. In table 4 may be found representative data of normal babies; it may be observed that the eruption of the first tooth may be delayed until 9½ months, in spite of the absence of all signs of rickets.

TABLE 4.—*Normal Cases*

Case	Date of Observation	Age, Months	Number of Teeth	Rosary	Phosphorus Inorganic, Mg. %	Roentgenographic Findings
1	4/19/21	6	0	Negative	....	Negative
	5/27/21	7	1	Negative	....	Negative
	8/ 5/21	9	3	Negative	....	Negative
	9/ 6/21	10	4	Negative	....	Negative
	10/14/21	11	7	Negative	....	Negative
	11/30/21	12	8	Negative	4.21	Negative
	12/27/21	13	8	Negative	....	Negative
	2/21/22	15	13	Negative	....	Negative
	3/24/22	16	15	Negative	3.89	Negative
	4/25/22	17	16	Negative	4.00	Negative
	5/31/22	18	16	Negative	4.54	Negative
5	11/30/21	6½	0	Negative	....	Negative
	12/23/21	7½	1	Negative	4.34	Negative
	2/ 5/22	9	6	Negative	4.54	Negative
	3/14/22	10	6	Negative	3.70	Negative
	4/23/22	11	7	Negative	3.57	Negative
	5/20/22	12	10	Negative	4.13	Negative
	6/25/22	13	12	Negative	4.00	Negative
20	7/20/20	6	0	Negative	....	Negative
	9/ 2/20	7½	2	Negative	....	Negative
	10/ 8/20	8½	2	Negative	....	Negative
	11/ 5/20	9½	4	Negative	....	Negative
	12/ 3/20	10½	5	Negative	....	Negative
	1/ 9/21	11½	8	Negative	....	Negative
	2/17/21	13	8	Negative	....	Negative
	3/18/21	14	8	Negative	....	Negative
	4/24/21	15	8	Negative	....	Negative
	5/27/21	16	8	Negative	....	Negative
	7/27/21	18	14	Negative	....	Negative
	8/31/21	19	16	Negative	....	Negative
21	10/ 8/20	8½	0	Negative	....	Negative
	11/ 2/20	9½	1	Negative	....	Negative
	12/ 3/20	10½	2	Negative	....	Negative
	1/ 5/21	11½	4	Negative	....	Negative
	2/15/21	13	5	Negative	....	Negative
	3/20/21	14	7	Negative	....	Negative
	4/22/21	15	7	Negative	....	Negative
	5/24/21	16	9	Negative	....	Negative
	7/ 5/21	17½	12	Negative	....	Negative
	8/16/21	18½	13	Negative	....	Negative
46	10/21/21	7	0	Negative	....	Negative
	11/23/21	8	1	Negative	....	Negative
	12/22/21	9	2	Negative	4.86	Negative
	1/27/22	10	2	Negative	....	Negative
	3/ 3/22	11½	3	Negative	3.86	Negative
	4/ 2/22	12½	4	Negative	....	Negative
	5/ 9/22	13½	4	Negative	3.84	Negative

The progress of dentition was followed in both the normal and the rachitic groups from the time of the appearance of the first tooth to the age of 18 months. Chart 2 shows the number of teeth, month by month, in the sixty-eight normal and the eighty-seven rachitic infants. The curve representing the nonrachitic group may be regarded as normal and shows that, at every period throughout an entire year, these infants had a larger number of teeth than the corresponding rachitic group.[7]

The deduction seems to be warranted that not only the first tooth but also the eruption of subsequent teeth is delayed in infants with rickets. Even in the mildest

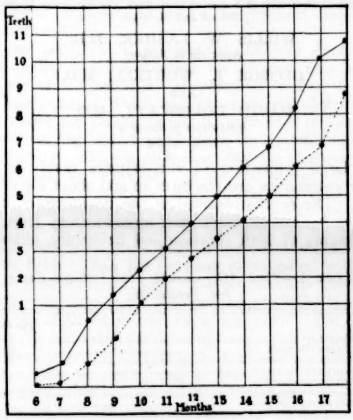

Chart 2.—Comparative progress of dentition in normal and rachitic infants from 6 to 18 months of age: solid line, normal infants; broken line, rachitic infants.

form of rickets that is at present recognizable, there is a definite delay of dentition in rachitic as compared with normal infants. This comparative retardation in dentition is true not only for the first tooth but also for all the deciduous teeth. This is interesting in showing the systemic nature of the metabolic disturbance of rickets as well as the close relation of teething to the development and ossification of the long bones.

But in spite of this definite difference between normal and rachitic infants, delayed dentition possesses little diagnostic value, for there are other factors—hereditary as well as postnatal—which influence the evolution of the teeth and detract from its importance. Tardy dentition must be classed with such indeterminate signs as delayed closure of the fontanel, and delay in sitting or in walking, and is not to be considered in the same light as beading of the ribs, enlargement of the epiphyses, bowing of the legs, or even bossing of the cranial tuberosities.

CONCLUSIONS

1. A review of the literature as to the rôle of dentition in the diagnosis of rickets reveals merely general statements and a striking paucity of data.

2. A study of mild rickets by means of clinical, roentgenologic and chemical methods showed that dentition is delayed even in this group of cases.

3. As a diagnostic sign of rickets, delayed dentition possesses little significance, however, owing to the variability in the time of eruption of the deciduous teeth.

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7. Almost all the infants included in the group as "normal" or "nonrachitic" had received prophylactic doses of cod liver oil.

FRACTURES ABOUT THE ELBOW JOINT

REVIEW OF ONE HUNDRED AND FIFTY CASES; END-RESULTS IN FIFTY-TWO CASES *

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A large proportion of the injuries involving the upper extremities are fractures in and about the elbow joint. The results obtained in the treatment of these injuries have often been most unsatisfactory from the standpoints of both function and deformity, although in our experience the fragments have never failed to unite. For this reason a study has been undertaken of 150 unselected consecutive cases treated from 1920 to 1925, to determine the results of a treatment instituted at the New York Post-Graduate Hospital, which will be described later, and to compare our end-results with those of other clinics. An attempt was made to follow up all cases after more than a year from the time of discharge, but only fifty-two patients responded to a request for their return.

TABLE 1.—*Time After Injury That Patients Came for Treatment*

	Per Cent
First day	21
Within one week	35
Within two weeks	13
Within three weeks	4
Within one month	7
More than one month	16
More than one year	4

ANATOMY

The elbow joint is the most highly specialized joint in the body. "The combination of the movements of flexion and extension of the forearm, with those of pronation and supination of the hand, which is insured by the two being performed at the same time, is essential to the accuracy of the various minute movements of the hand. Owing to the obliquity of the trochlear surface of the humerus, the movements of flexion and extension do not take place in a straight line. When the forearm is extended and supinated the axis of the arm is not in the same line as the axis of the forearm, but the axis of the arm forms an angle with the axis of the forearm, and the hand with the forearm is directed outward. During flexion, on the other hand, the forearm and the hand tend to approach the middle line of the body." The shape of the articular surface of the humerus, with its prominences and depressions accurately adapted to the opposing surface of the olecranon, prevents any lateral movement.

CAUSES

The causative agent in all our cases was violence; that is, there were no cases of spontaneous or pathologic fracture. Indirect violence was the cause in 66⅔ per cent, direct in 32 per cent, and muscular in 1⅓ per cent.

INCIDENCE

Eighty-two per cent of the cases occurred in children under 15 years of age; 79 per cent occurred in males. The right elbow was involved in 53 per cent, which is not quite as high as might be expected.

DURATION

From table 1 it will be noted that the majority of patients came to us within the first week, yet a large number came for treatment after more than two weeks from the date of injury.

TABLE 2.—*Frequency of Sites Involved*

	Stimson, 1904 97 Cases		Ashhurst, 1910 56 Cases		Neuhof and Wolfe, 1914 100 Cases		Cutler and Cave, 1924 64 Cases		Siris, 1925 181 Cases*		Post-Graduate Hospital, 1925 150 Cases	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Supracondylar	26	26.8	29	51.78	49	49	32	50	109	61	62†	41.33
Internal condyle	15	15.38	4	7.14	21	21	4	6.25	20	11	40	26.66
External condyle	45	46.39	12	21.64	14	14	7	10.9	21	11.6	19	12.66
Intercondylar	9	9.28	1	1.78	..	..	2	3.12	..	.....	2	1.33
Capitellum	..	.....	..	.....	..	..	4	6.25	..	.....	2	1.33
Coronoid process of ulna	..	.....	..	.....	..	..	..	.....	..	.....	1	0.66
Upper radius	..	.....	..	.....	5	5	..	.....	5	2.7	17	11.33
Olecranon	..	.....	..	.....	..	..	..	.....	3	1.6	7	4.66
Epiphyseal separation of humerus	1	1.03	7	12.46	..	..	7	10.9	..	.....	..	.....
Trochlear	1	1.03	..	.....	..	..	..	.....	..	.....	..	.....
Epitrochlear	..	.....	3	5.34	..	..	7	10.9	..	.....	..	.....
Epicondyle	..	.....	..	.....	..	..	1	1.56	..	.....	..	.....
Upper ulna	..	.....	..	.....	11	11	..	.....	..	.....	..	.....

* Includes dislocations
† Includes epiphyseal separation.

PATHOLOGY

Types.—We have followed Moorhead's[1] classification of fractures under two types. In type 1, the fragment or fragments are displaced at least a distance equal to their own diameter; type 2 includes those not in the first group, the nondisplaced. In this series we have 76 per cent of the type 1 variety.

Sites.—There is a great variance between our findings and those of other authors regarding the frequency of the sites involved, especially the large percentage of internal condyle fractures in our series (table 2).

Associated Lesions.—In all fractures about the elbow joint, as in fractures at other joints, in addition to the bony involvements there is always associated injury to the soft structures—vascular, synovial, muscular and sometimes neural, such as musculospiral or ulnar involvement. In our series of cases, the musculospiral nerve was injured three times and the ulnar eleven.

* Read before the Section on Surgery, New York Academy of Medicine, Dec. 4, 1925.
* From the Department of Traumatic Surgery, New York Post-Graduate Medical School and Hospital, Dr. John J. Moorhead, director.

1. Moorhead, J. J.: Measuring End-Results After Injury, J. A. M. A. 79: 824 (Sept. 2) 1922.

Because of the discrepancy between the anteroposterior and the lateral diameters of the humerus, there is a great tendency to comminution, and comminution increases the likelihood of soft structure damage.

TREATMENT

In our routine we have adopted what Sir Robert Jones [2] calls "the golden rule of treatment." He says: "They should all be treated with the elbow fully flexed and the forearm supinated, with the single exception of fracture of the olecranon, which requires full extension. . . . The best means of reduction, I would almost venture to say the only means of complete reduction, is a combination of complete flexion of the elbow with downward traction of the forearm. If the limb is then bandaged in complete flexion with the forearm supinated, that is, with the palm toward the shoulder, a good result in every case of simple, uncomplicated fracture is practically assured." We believe, with Jones, that any case not lending itself to this method of reduction requires open operation; in our series, 8 per cent of the cases required open correction. This operation was resorted to only after two attempts at closed reduction were unsuccessful.

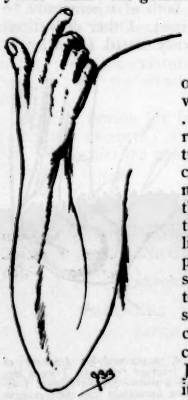

Fig. 1.—Elbow in acute flexion, after reduction of fracture about the elbow joint; ulnar side of the small finger on a plane with the tuberosity of the humerus; palm facing shoulder. The normal carrying angle will be maintained by this position.

The closed method of reduction can usually be carried our without anesthesia in cases seen very early. In our experience, after a few hours have elapsed, an anesthetic is usually indicated. The anesthetic of choice for older children is gas, and for younger ones, ether. Our method has been to flex the elbow to such a degree that the radial pulse is obliterated, and then slowly extend the forearm until the pulse becomes perceptible, and keep the elbow flexed to that point. At the same time it is necessary, in order that the normal carrying angle be preserved, that the ulnar side of the small finger be on a plane with the outer side of the greater tuberosity of the humerus, as shown in figure 1. In cases of overriding (type 1), in addition to the manipulation described, traction on the lower fragment must be made before flexion of the elbow is carried out. The traction must be slow, steady and sustained. The length of traction is dependent on (*a*) duration of fracture; (*b*) extent of overriding, and (*c*) musculature of the patient. The purpose of traction is to "set" the muscles and allow the fragments to aline. The rationale of this treatment has been fully explained and it is unnecessary to go into further detail. The flexion position is maintained by a figure of eight bandage placed about the forearm and arm in such a way as not to encircle the limb (fig. 2). A pad of gauze is placed in the crease of the elbow, which has been previously powdered, the purpose of which is to keep the apposed skin surfaces apart and thus prevent an intertrigo. (This is a modified Ashhurst dressing.) The application of the dressing may be greatly facilitated by having the patient grasp the fingers of the injured member and bring the forearm of the uninjured side back of the head. This will maintain the elbow in acute flexion and the dressing can be readily applied. It is admitted that this immobilization is not absolutely rigid, but the degree of motion allowed is negligible so far as the practical end-result is concerned.

After reduction it is essential that the patient be kept under close observation for at least two hours, because of the possibility of increased swelling following manipulation, which may cause arterial obstruction. Thereafter the patient should be instructed to keep the fingers moving and to watch them for cyanosis and for contracture. On the following day the dressing and limb should be inspected. At the end of two days the dressing is removed, and massage and guarded passive motion are instituted. By guarded motion we mean extension of the forearm to an angle of 90 degrees and flexion to an acute angle while the fracture site is firmly held. Then the dressing is reapplied with the elbow joint acutely flexed. This treatment is continued on alternate days, with the forearm gradually lowered, i. e., the angle of flexion made less acute, until on or about the tenth day the dressings are entirely discarded and the forearm is carried in a sling. (This treatment applies alike to adults and to children.) From this point the patient is made to move the elbow twice from a right angle to an acute angle, several times daily, by active motion of the forearm. At the same time, massage is given, preferably each day, for a fortnight, and three times weekly thereafter until the elbow can be fully flexed and extended. Obese persons, especially women, do not lend themselves readily to this form of treatment and usually require immobilization of the elbow in flexion at a right angle. Eisendrath [3] states that "the standard method of treatment for the majority of fractures of the lower end of the humerus still remains immobilization of the elbow in flexion at a right angle." We believe that this treatment applies only to the obese.

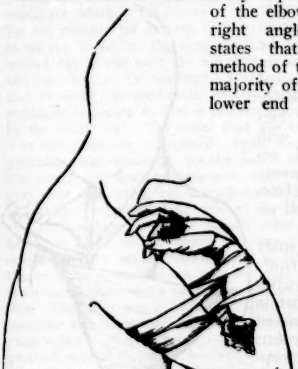

Fig. 2.—Figure of eight bandage, placed about arm and forearm to maintain acute flexion position; pad of gauze in bend of elbow.

Fractures of the head of the radius require operation only when the fragments are so displaced as to act as foreign bodies and interfere with the function of the joint.

One should give more attention to the flexion of the elbow than to extension. Complete flexion is essential, while extension is more apt to return by the force of gravity, and can be augmented by the carrying of heavy objects. Physiotherapy and use of the elbow should be discontinued when signs of inflammation are

2. Jones, Robert: Injuries to Joints, 1918, p. 87.

3. Eisendrath, D. N., in Keen's Surgery 4: 179, 1919.

manifested; the elbow should then be kept at rest and a wet dressing applied until the inflammatory reaction has disappeared. The time given to physiotherapy will depend on (1) the type of fracture, (2) the amount of periarticular damage, (3) the amount of intra-articular damage and (4) the type of the treatment. The average time given to treatment was forty-seven days.

Fig. 3.—Figure of eight placed about the arm and forearm so as not to encircle either part.

END-RESULTS

In determining end-results of fractures, it has been the custom to rate them on the functional result alone, no attention being given to the appearance of the limb or to the type or amount of callus.

Ashhurst[4] implies by a perfect result one in which the full range of normal motion and the normal carrying angle are present. In a study of forty-seven cases, he reports the results in 81 per cent to be perfect, 8 per cent with limited motion, 9 per cent with varus, and in 2 per cent with valgus deformities.

Cutler and Cave,[5] in a study of sixty-four cases, report an average functional end-result in 89 per cent.

Neuhof and Wolfe,[6] in a study of 100 cases, found perfect result in 53 per cent and imperfect results in 47 per cent, the imperfect results occurring largely in those patients who appeared for treatment more than a month after the injury.

Siris [7] had in ninety-two cases of supracondylar fracture of the humerus twenty-six excellent functional end-results; in twenty internal condyle fractures, sixteen with good functional results, and in twenty external condyle fractures, fifteen good results.

König,[8] in a study of roentgenograms made three years after injury, found that in children even marked deformities disappear, apparently by absorption.

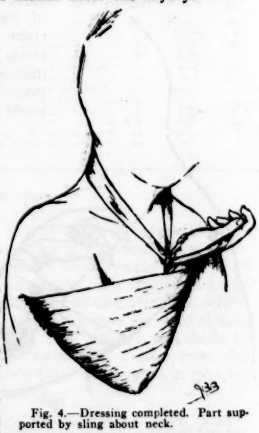

Fig. 4.—Dressing completed. Part supported by sling about neck.

In calculating our end-results we have followed a method of rating in terms of function, union and contour, as described by Moorhead. On a basis of 100 per cent for a perfect result, he allows 60 per cent for function, 20 per cent for contour and 20 per cent for union. A study of fifty-two cases, made after more than two years had elapsed since the date of the injury, gave the rating of 51 per cent for function, 18.7 per cent for union, and 16.7 per cent for contour, a total average end-result of 86.4 per cent restoration.

Some of the deductions were for ischemic paralysis presumed to be due to pressure from plaster casts, which existed in two patients, both of whom came to us after the ischemia was manifest. Other deductions were made for reasons previously stated (seen by us late, etc.).

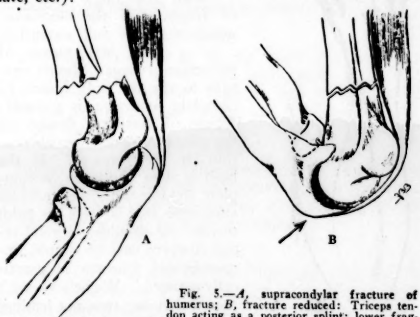

Fig. 5.—*A*, supracondylar fracture of humerus; *B*, fracture reduced: Triceps tendon acting as a posterior splint; lower fragment steadied by the radius and ulna, fitting accurately into their relative depressions in the lower end of the humerus.

In our cases we had twelve perfect results, eighteen presenting an exaggeration of the normal carrying angle, four with loss of the carrying angle, two with complete loss of function, and sixteen with perceptible thickening about the joint but no functional limitations.

REASONS FOR POOR RESULTS

It might be well to consider at this point the reasons why poor results are obtained in fractures about this region. They are: 1. Filling up of the coronoid and the radial depressions on the anterior surface of the humerus with callus or organized deposits. 2. Interposition of bone between the radius or ulna and the humerus. Attached to the condyles are the flexor and extensor muscles of the forearm and hand, which in their action pull forward and downward the respective condyles when fractured, and thus interpose these fragments. 3. Failure properly to maintain the normal carrying angle of the elbow joint, which is about 165 degrees. 4. Myositis ossificans, either as a result of treatment, such as too vigorous passive motion and massage, or as a result of the original trauma causing marked swelling and a consequent interference with the circulation, manifests itself by a massive bony deposit on the anterior surface of the elbow. This deposit acts as a definite and permanent bony block.

CONCLUSIONS

From the end-results obtained we believe that:

1. Early motion and massage are conducive to early functional restoration.

2. The farther away from the joint the fracture exists, the less likelihood there is of ankylosis; the closer to the joint, the greater the tendency to excessive callus.

3. Obese patients are not easily amenable to this form of treatment.

4. Ashhurst, A. P. C.: Fractures About the Elbow, 1910.
5. Cutler, C. W., Jr., and Cave, H. W.: Fractures of the Elbow, Surg., Gynec. & Obst. **38**: 653 (May) 1924.
6. Neuhof and Wolfe: Fractures of the Elbow, Surg., Gynec. & Obst., March, 1915.
7. Siris, I. E.: Elbow Fractures and Dislocations, Surg., Gynec. & Obst. **40**: 665 (May) 1925.
8. König: Arch. f. klin. Chir. **85**: 187.

4. Displaced fractures of the head of the radius require open correction when the fragment interferes with joint function; i. e., acts as a foreign body in the joint.

5. Nonunion at the elbow does not occur except in avulsion fractures.

6. Certain cases, no matter what the type of injury, show poor end-results.

7. Traction, when needed, must be slow, steady and sustained. The duration of traction is dependent on (*a*) duration of fracture, (*b*) extent of overlapping and (*c*) the musculature of the patient, the purpose being to "set" the muscles and allow the fragments to aline.

8. Acute flexion for fractures about the elbow joint (olecranon excepted) is the treatment of choice.

9. The earlier the reduction, the better the end-result.

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RETROPERITONEAL PELVIC ABSCESS IN THE MALE

REPORT OF CASE *

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In view of the paucity of the literature and the difficulty in making a diagnosis in cases of retroperitoneal abscess in the male, the report of this case is considered worth while. In 1886, Burchard [1] presented reports of five cases seen by him in fourteen years, several of these in consultation. He also cited one case reported by Bowditch, and stated his belief that these cases were more frequent than was usually supposed. He stressed the pathologic changes and recounted the tendency of these abscesses to burrow and dissect in every direction, up as far as the diaphragm and down into the thigh. He especially emphasized the difficulty in making a diagnosis and commented on the obscurity of the etiology. In several of these cases, diagnosis was made when the abscess ruptured, either into the rectum or exteriorly. In the six cases mentioned, three patients died, one directly of the sepsis, one of nephritis and the third of tuberculosis. One case became chronic with discharging sinuses; in two in which the details were not given, the patients recovered.

In 1913, Thomas [2] reported the case of a man who had been ill with vague symptoms for months, when he passed a quantity of pus by rectum and apparently recovered. Five years later the diagnosis of abscess was made, and it was drained retroperitoneally.

At a meeting of the Philadelphia Academy of Surgery in 1913, two cases were reported.[3] These were in children, aged 8 and 10, respectively, following injury and osteomyelitis.

Though cases cannot be as rare as this would indicate, no others are found in the literature. The condition is at least uncommon.

REPORT OF CASE

W. E. F., a man, aged 64, a preacher for many years, and then a carpenter, presented a negative history except for scrofulous glands in the neck during childhood, which were removed surgically. There was no venereal history. The patient had always appeared emaciated but had manifested good resistance to disease. For several months he had been building a home and had occupied himself with this in his leisure time, thus working from fourteen to sixteen hours each day.

After a siege of boils lasting for months, he began, Sept. 6, 1925, to have diarrhea, from no known cause, for which reason he remained at home but attempted to work about the house. Diarrhea continued for ten days, when suddenly obstipation ensued, associated with severe pain, first in the shoulders, later in all the joints of the body, the lumbar region of the spine, the calves of the legs, and the abdomen. When first seen, he had been unable to sleep for three nights because of the pain. At first mild sedatives were used but without effect, and it was necessary to give morphine before relief was obtained. Half a grain (0.03 Gm.) by mouth relieved him for seven hours, when he was again awakened by the pain.

The patient was emaciated and was suffering considerably. The temperature was 98.4; pulse, 54; blood pressure 122 systolic and 74 diastolic. The radial arteries were easily palpable half way to the elbow. He was very weak and staggered on attempting to walk. The teeth were in poor condition, with extensive pyorrhea and caries. The tonsils oozed pus on pressure, a culture showing, besides the common throat organisms, *Streptococcus viridans*. A few piping râles were heard on both sides of the chest. The heart sounds were clear. There was no panniculus adiposis; the abdomen was tender and generally spastic. Much gurgling in the bowels was heard during palpation of the abdomen. There was a bilateral indirect inguinal hernia. On chemical examination, the blood was normal. A blood count showed hemoglobin, 88 per cent; red cells, 4,770,000; leukocytes, 6,300. The urine and stools were negative for pathologic components. Proctoscopic examination revealed a colon sagging slightly into the rectum. This was thought to be due to an obstruction above the limits of the sigmoidoscope. The prostate was large, soft, boggy and tender, but well delimited. Fluoroscopic examination of the chest showed a tortuous aortic arch.

Neurologic examination was negative except for marked weakness, which in the course of two days made it impossible for the patient even to turn in bed. For a time this applied to all the limbs, but the arms slowly improved. During the second day in the ward the temperature was from 97 to 98.4 and remained so for ten days. Retention of urine developed, and frequent catheterization became necessary. The pulse gradually increased so that it reached normal, from 72 to 76, by the fourth day. The spinal fluid was entirely normal.

In the meantime, consultation from every specialty except neurology was obtained. By the fourth to the seventh day, the vesical and anal spincters were relaxed. Abdominal surgery was considered, but enemas and hypodermic injections of pituitary extract entirely relieved the abdominal distention and pain, making immediate surgery seem unnecessary. The leukocyte count on the fourth day was 19,500. Barium by mouth and by enema showed only a relaxed bowel wall. Genito-urinary examination revealed clear and normal urine from each kidney, and a normal pyelogram but a purulent cystitis. The latter was evidently secondary to a relaxed vesical sphincter and catheterization, as the urine was clear at the first examination. There was no evidence of primary urinary or gastro-intestinal disease. However, there was evidence of pus somewhere, as the leukocyte count rose to 34,000 and remained at 28,000 after the bladder had been rendered aseptic. The temperature increased to 101 and the pulse became rapid, from 100 to 120. About thirty pustules appeared in crops over the dorsolumbar region, face and hands. Cultures were made from these, revealing *Staphylococcus albus*. The patient's condition was steadily growing worse.

Two weeks after entrance a tumor mass developed in the left inguinal region, which, on account of the old hernia and the amount of pituitary extract used, was thought to be a hernia. Attempts at taxis failed. The swelling was then opened under lumbar anesthesia, and sanguineous pus was found; but there was no evidence of peritonitis. No viscus was present in the sac.

* From the Neurological Clinic of the Battle Creek Sanitarium.

1. Burchard, T. H.: Pelvic Abscess in the Male, M. Rec. **29**: 461 (April 24) 1886.
2. Thomas, T. T.: Large Retroperitoneal Abscess of Uncertain Origin, Drainage by Groin, M. Times **41**: 109 (April) 1913.
3. Speese, J.: Retroperitoneal Abscess, Tr. Philadelphia Academy of Surgery **16**: 156, 1914.

This region was thoroughly drained through the wound, as the spermatic cord and bladder peritoneum showed evidence of necrosis. The fluid obtained through the drain appeared urinous, but it was mixed with pus. A self-retaining catheter was inserted.

Four days after the operation, an enema was given. Feces and pus welled from the drains. The whole site of operation then sloughed, leaving a large sinus, which discharged freely. No peritonitis occurred. The patient gradually lost ground for three weeks, during which time feces and pus discharged freely. He died of general toxemia and exhaustion.

At necropsy a liter of yellow pus was found retroperitoneally. This filled the pelvis, extending from the perineum to the brim of the true pelvis and surrounding the rectum. The rectum was perforated 2 inches above the anus.

COMMENT

The outstanding features of the case were the obscure etiology, which was not absolutely solved even at necropsy, and the extreme difficulty in arriving at a diagnosis before the abscess ruptured. The occurrence of the pain in the lumbar region and the calves of the legs, with extreme weakness of the lower extremities and relaxed vesical and rectal sphincters, all pointed to a lesion of the spinal cord. But these symptoms were all explained at necropsy by the occurrence of pus surrounding the nerves in the pelvis.

A NEW MEDIUM FOR GONOCOCCUS CULTURE *

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AND
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The cultivation of the gonococcus is so thoroughly dependent on ideal cultural conditions that very slight deviations from that ideal make for failure. To one who tries to grow this germ it early becomes apparent that much in the literature on the subject should be rewritten, for there is much of a negative nature that really belongs to faults in the medium and is not to be attributed to peculiarities of the gonococcus itself. There are few pathogenic bacteria about which more romance has been spun. One investigator finds that certain things prevent its growth in culture, and another finds the same things to be essential to its growth. One early investigator popularized one of our most common mediums of today for the special reason that he was able to grow what he called the gonococcus on it, and today we use it as a differential medium because we say the gonococcus will not grow on it in initial culture. One group of investigators tells us that we must reduce the oxygen tension to get good growths, and we break countless test tubes in following them only to find that the culture grows equally well and probably better at normal oxygen tension. One could write chapters on the false leads of gonococcus culture.

For these and other reasons, the impression has gone abroad that the gonococcus is an extremely hard germ to grow and it should be tried only by the most skilled bacteriologist. The real truth of the matter is that if just a few conditions are complied with it is as easily grown as most of the other micro-organisms. The difficulty does not rest with the bacteriologist unless he makes the culture medium, for success or failure rests with the medium and not with the other technic. Given the proper food and drink, the gonococcus behaves practically as the other easily culturable germs do and not as the profession at large thinks it does.

It is our feeling that the time is here when we should drop many of our false ideas in this regard, for they have done much to retard our progress in the general understanding of the disease. There is much in the behavior of the germ in culture to explain its action in the tissues themselves, and there is need for greater knowledge on many of the cultural phases.

The essential things to good growth are proper food at a hydrogen ion concentration between 7.3 and 7.7 and much moisture. If these three things are complied with, one can subject the culture to all sorts of temperature indignities before placing the tube in the incubator, and still the germ will grow. He can take the culture at the hospital, put it in his satchel for a day or two, even in the winter, and when he finds it convenient he can incubate it and it will grow. Or, he may put it in his overcoat pocket and throw the coat over the average steam radiator much above body temperature and, if it is not too good a radiator, still the culture will grow when incubated. We have subjected cultures to greater indignities than either of these and have found that they invariably grew if the medium was right. Surely a germ that will live hours on a block of ice, days at room temperature and rather long periods at temperatures considerably above the supposedly fatal one of 41 C. should not be called delicate and hard to grow.

The making of the mediums that heretofore have given us our best results have, however, presented some difficulties and have been the cause of many disappointments. Beyond the trouble of obtaining some of their ingredients there has been much difficulty in handling them in quantity without other bacterial contamination. These were the chief sources of our early disappointments and the reason why we began to search in other fields for mediums that required less handling and received their sterilization when completed, instead of when only partially so.

Of the many mediums devised for the growth of the gonococcus, those containing a high percentage of albuminous fluids, such as blood serum and hydrocele or ascitic fluids, have given us our best results. These possess very obvious disadvantages. The albuminous fluids are at times difficult to obtain in quantity; they require much handling, which often means contamination, and they cannot be subjected to sufficient heat for sterilization without becoming coagulated. The use of such substances as nutrose to prevent this coagulation is complicated; it is not always reliable and introduces substances not best for the germ.

* The gonococcus grown on hydrocele agar, or either of the other like mediums, grows luxuriantly and autolyzes quickly, so that subcultures must be taken every second or third day if the strain is to be kept viable. This greatly increases labor, is a distinct disadvantage, and has done much to retard the studies of the germ.

For these and other equally important reasons, it seemed imperative to find some medium that had equal advantages and lacked their disadvantages. In the search for this, certain fundamental requirements were laid down as follows:

1. The ingredients must be easy to obtain.
2. The medium must be simple and easy to make.
3. It must be unharmed by autoclaving.

* Aided by a grant from the S. C. Childs Research Fund.
* From the Department of Urology, University of Pennsylvania.
* Read before the Eastern Pennsylvania Chapter of the American Association of Bacteriologists, Philadelphia, Oct. 26, 1925.

4. It must grow the gonococcus from fresh gonorrheal pus.
5. It must also grow it in indefinite subcultures.
6. It must not bring about such early autolysis as do the albuminous mediums but should prolong viability for far greater periods.

After trying countless substances previously tried and many apparently new ones for the purpose, we have been able to make a medium that fulfils all the foregoing requirements to a degree far beyond our expectations. It is in only one respect very slightly inferior to our former best mediums. While it gives just as many positive first cultures, they are not usually so luxuriant, but in subcultures the growth picks up so that it is equal to those on the other mediums. In all other respects it is vastly superior to the others. Its ingredients are obtainable anywhere; it is as simple to make as plain agar; it keeps indefinitely; it can be autoclaved after it is tubed; it is as clear as good agar medium, and it will retain a viable growth for as long as one month.

METHOD OF MAKING NEW MEDIUM

A calf's brain, weighing approximately 500 Gm., is forced through a wide-meshed gauze into 500 cc. of distilled water and placed in the icebox for twenty-four hours. It is then filtered several times through cotton of varying degrees of compactness. The resultant fluid is turbid, no matter how often it is filtered. To this is added 0.5 per cent of acid sodium phosphate and 1 per cent of peptone. It can now be autoclaved at 15 pounds pressure for twenty minutes and kept as stock, or the final steps for its completion can be carried out.

To complete the medium it is necessary simply to add one part of the brain bouillon to three parts of standard 2.5 per cent agar medium made from veal broth, with the addition of 0.5 per cent of sodium chloride and 1 per cent of peptone. It should then be adjusted to a p_H of 7.8, which allows for a reduction of two points in autoclaving, 7.6 being the desired end-point.

The medium is then tubed, autoclaved and slanted. After it solidifies, the usual cotton plug is replaced by a sterile rubber cork to retain the water of condensation, and the medium keeps indefinitely.

When it is completed and cooled, some flocculation is present in the butt of the tube. This can easily be removed if the medium in bulk is placed in the autoclave, quickly brought to 15 pounds pressure, removed, filtered, tubed and replaced in the autoclave for the completion of sterilization. While this improves its appearance, it seems to make some change in it which causes more scanty growths; consequently, we have not made use of it, preferring a good medium rather than a pretty one.

SUMMARY

1. Gonococcus culture, provided the medium is good, is as easy as other ordinary routine cultures.

2. Much of the literature on its culture should be rewritten, for medium faults have been interpreted as peculiarities of the germ itself.

3. The profession at large has a false impression regarding its culture that has done much to retard the studies of the germ.

4. Our best mediums heretofore have been hard to make; they frequently became contaminated through the necessary handling; they could not be sterilized by heat, and the germ usually died on them well within a week.

5. A new medium is presented that is as simple to make as ordinary agar. It can be autoclaved after completion; it gives as many positive first cultures; it grows the germ indefinitely in subcultures and retains its viability for at least one month.

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Clinical Notes, Suggestions and New Instruments

PERSISTENT OMPHALOMESENTERIC DUCT AND URACHUS IN THE SAME CASE

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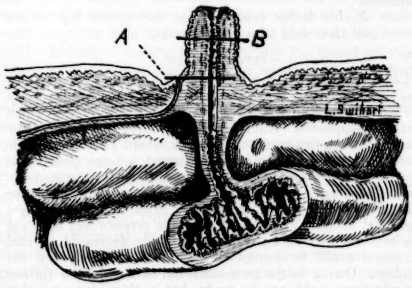
Though it is not uncommon to find a case of patent urachus or patent omphalomesenteric duct, to have the two in the same patient is very rare. We have been able to find only two such cases in the literature.

REPORT OF CASE

R. H., a boy, aged 1 year, was admitted to Clarkson Hospital, Feb. 26, 1925, with the complaint of discharge from the umbilicus. The physician who delivered him made the statement that at birth, March 5, 1924, the umbilical cord was very large. When he was 6 days old, his father reports, some material that looked like feces was discharged from the umbilicus. Since then there had always been some moisture at the umbilicus. At 6 weeks the physician cauterized the umbilicus with a silver nitrate stick. This had no effect and there had been some liquid discharge ever since. The child was well nourished. A dressing over the umbilicus was moist with a small amount of urine. At the umbilicus was an elevated pouch covered with mucous membrane which was



Schematic drawing from gross and microscopic findings: *A*, plane of section through base; *B*, plane of section through protruding mass.

red and bled easily. In the center was a small sinus from which came a small quantity of urine. It was impossible to pass a probe up this sinus. Owing to a slight cough, the operation was postponed until March 2.

Under ether anesthesia an elliptic incision was made about the umbilicus and a sinus tract which appeared to go to the bladder was dissected out. There seemed to be a small branch from this tract extending inward into the abdomen at its upper end, but this was rather indefinite, and thinking we had simply a patent urachus, no more attention was paid to it. The sinus tract definitely led into the bladder. At its entrance into the bladder it was cut off and the stump inverted with a purse-string suture, as is done with an appendix. At this time the anesthetist warned us that the patient was very pale and the pulse was rapid and thready. The peritoneum was bluish as if there was a hemorrhage beneath it. Because of this and symptoms of hemorrhage, the peritoneum was incised. The peritoneal cavity contained considerable blood, and at the free edge of the ileum at the common location for a Meckel's diverticulum was a spurting artery. This was the omphalomesenteric artery, which had persisted and had been cut as we did not realize that there was a patent omphalomesenteric duct. This artery was tied off and the raw surface inverted with a purse-string suture. The wound was closed without drainage.

The umbilicus and adjacent tissue was removed. A mass measuring 1.5 cm. in length and 1 cm. in diameter protruded from the external surface. This had a definite shape, resem-

bling an everted piece of intestine. The incision through the skin of the abdominal wall was made 0.4 or 0.5 cm. around the base of this protuberance and extended from 0.8 to 1 cm. in depth.

Serial sections made through the base showed that it consisted chiefly of fibrous tissue partly covered with squamous epithelium *(A)*. In the fibrous tissue were many blood vessels and some sebaceous glands. In all the serial sections there was a tube measuring 1 mm. in diameter. This was lined with transitional stratified epithelium and filled with a crystalline substance. This tube was undoubtedly a patent urachus. Through the center of the fibrous tissue there was an irregular, ragged lumen not lined with any epithelium. This had the appearance of something having been torn from it.

Sections taken through the protruding mass (*B*) showed it to be an evaginated piece of intestine showing all structures of the wall, on the inside and the outside of the protuberance.

These findings indicated that there was both a patent urachus and an evaginated patent vitelline duct, the latter forming the red protruding mass which, when cut at operation, permitted the distal part to evaginate farther. This, together with the manipulation and traction necessary at operation, pulled the intestine through the base, leaving an irregular opening.

With hypodermoclysis the boy's condition improved rapidly. Healing was by primary union and he left the hospital, March 16, with the wound healed and apparently in excellent condition.

June 26, his father reported that the wound had stayed closed and there had been no discharge.

PREVIOUS CASES

Lexer's[1] patient was a boy, aged 1½ years. On the fifth day after the cord came away, fluid was seen coming from the umbilicus, also a reddish tumor at that location, which finally disappeared. After the use of salves and plasters for six months the fistula closed, but this caused general systemic disturbances. When the fistula reopened, a large quantity of watery fluid escaped and at one time, it was thought, some pus. There was a marked congenital phimosis, and each time that the child urinated considerable urine escaped from the umbilical fistula. Four weeks after the prepuce had been cut the urine flowed normally and the fistula decreased in size. A sound could be passed through the fistula toward the bladder. Owing to the poor condition of the child, a further examination could not be made, but a line of granulation tissue communicating with the fistula was noted. The sac was dissected out and the wound closed. Microscopic examination of the fistulous tract, which was 7 cm. long, showed that it was a persistent omphalomesenteric duct. Cross-section showed a well developed intestinal mucosa, lined with cylindric epithelium and having typical Lieberkühn's glands, and also circular and longitudinal muscle fibers. The history clearly shows the existence of a urinary fistula, and microscopic examination shows a tube lined with intestinal mucosa.

Cullen[2] reports another case, related to him by Dr. Heflin. A boy, aged 14 months, had bleeding from the umbilicus two or three days after birth. Aside from this and a tight prepuce, which had to be released, he was perfectly well. Constipation and crying caused bleeding from the umbilicus. Bleeding was stopped temporarily sometimes by pressure, sometimes by the use of the cautery, epinephrine or hydrogen peroxide, but in spite of these hemorrhage continued and the child became quite anemic. A small piece from the umbilicus microscopically suggested malignancy. Since birth there had been some discharge from the umbilicus, which had the odor of urine and at other times suggested feces. On operation an elliptic incision about the umbilicus showed a continuous fistula 3 inches long, from the umbilicus to the ileum. He removed this and inverted the stump at the ileum. He also found a second patent tube attached to the umbilicus and extending toward the bladder. He tied it off with catgut at the bladder and closed the wound.

1. Lexer, E.: Ueber die Behandlung der Urachusfistel, Arch. f. klin. Chir. 57:73, 1898.
2. Cullen, T. S.: The Umbilicus and Its Diseases, Philadelphia, W. B. Saunders Company, 1916.

Sections through the mass of the umbilicus showed two distinct tubes. The larger one was almost circular and lined with intestinal mucosa of the type found in the ileum. Surrounding the mucosa was muscle. The smaller tube was somewhat disorganized but was surrounded by muscle, and its inner surface consisted chiefly of granulation tissue which had become organized, with some polygonal cells and some lymphoid cells. This undoubtedly represented the degenerated urachus.

The case that we report also illustrates the possibility of persistent omphalomesenteric artery which might be the cause of serious hemorrhage following resection of the vitelline duct.

SUPPURATION OF THE SHOULDER JOINT: REPORT OF TWO CASES

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The two cases of abscess of the shoulder joint here reported are of interest in that one case illustrates the results of neglecting to operate until destruction of joint structures has occurred, while the other shows the effects of comparatively early treatment.

REPORT OF CASES

CASE 1.—A boy, aged 16, seen, Jan. 18, 1924, had injured his right shoulder severely in a football game during October, 1923. A roentgen-ray examination at the time disclosed no fracture. The shoulder continued to be very painful, and during December, two months after the injury, a marked swelling of the part developed. This received no treatment except by a chiropractor, until I saw the patient four weeks later. Examination at this time showed a considerably emaciated boy, with a marked swelling of the right shoulder, especially prominent on the anterior aspect, giving a sensation of fluctuation. The leukocyte count was 7,500, and there was a slight rise of temperature in the evening. A quantity of pus was aspirated to relieve the tension, and a study of this showed no tubercle bacilli but many staphylococci. Roentgen-ray examination of the shoulder at this time showed evidence of osteitis in the lower angle of the glenoid process.

January 26, the joint was opened by an anterior incision and a large quantity of thick pus was evacuated, which had burrowed extensively between the muscle and fascial layers of the shoulder and arm. The necrotic bone was partially curretted away, and thorough drainage of the shoulder joint and arm was established. Following operation, the infected areas were irrigated with surgical solution of chlorinated soda (Dakin's solution) several times a day. An autogenous vaccine was given at this stage. The discharge and swelling rapidly subsided and the patient left the hospital at the end of four weeks, although there remained a small discharging sinus. The sinus persisted until August, 1924, when a small sequestrum made its way to the surface, after which the sinus remained closed permanently. No attempt was made to immobilize the shoulder. Although there is now a complete ankylosis between the humerus and the scapula, the patient can use his arm, and to the casual observer there is very little disturbance of function.

CASE 2.—A woman, aged 35, seen with Dr. H. L. Coleman of Farragut, Iowa, June 24, 1924, had had an induced abortion a year previously, following which she had a high fever and chills, presumably from a pelvic infection. A month before I saw her she was operated on for pelvic complications, an appendectomy and a double salpingectomy being performed; she made a good recovery. Ten days previously, she began to have pain in the right shoulder, which became very severe and which was accompanied by an intermittent fever and rapid pulse.

When seen, the patient had a fever of 104 and a pulse of 130. There was marked swelling of the right shoulder, with a sensation of fluctuation. Pus obtained by aspiration showed the presence of streptococci. The patient was taken to the hospital, and the shoulder joint opened by an anterior incision. The joint capsule had ruptured, and a large amount of thin pus was evacuated from the joint cavity and surrounding structures.

The infected area was treated freely with surgical solution of chlorinated soda. The infection rapidly cleared up and the patient went home in fourteen days, with no remaining effects of the trouble except considerable stiffness about the shoulder. There was no ankylosis.

COMMENT

These cases illustrate the importance of the early drainage of suppurating joints. Immobilization may be advisable early in severe cases, but as the severity of the symptoms abates it is probably best to allow considerable freedom of movement combined later with passive motion. The active exercise of suppurating joints, as advocated by Willems,[1] seems too severe for the more acute cases. If ankylosis seems unavoidable, precautions should be taken to establish the most useful position of the parts that is possible.

Special Article

THE TECHNIC OF MEDICATION

A SERIES OF ARTICLES ON THE METHODS OF PRESCRIBING AND PREPARING, THE INDICATIONS FOR, AND THE USES OF VARIOUS MEDICAMENTS *

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(Continued from page 625)

PERLINGUAL ADMINISTRATION

It seems that the absorptive power of the mucous membrane of the mouth and tongue and especially that underneath the tongue, and the rapidity with which medicaments can be made to enter the systemic circulation, are not sufficiently appreciated by physicians. The sublingual space, it is asserted, offers a more direct entry into the general circulation than does the stomach.

Paulson,[25] who first devised this method thirty years ago, asks any one to be "good enough to refresh his memory by looking in the nearest mirror at the sublingual space, noting the thin membrane, the considerable area, and the large veins, denoting a free flow and return of blood. The space is always smooth, never furred like the tongue, never shielded by mucus, as the stomach always is when in active rebellion or, may be, masked by half-digested food." The surprising efficiency of perlingual administration might further be accounted for by the fact that the agent thus applied escapes not only the digestive ferments but also, to a much greater extent than when given perorally, the destructive influence of the liver cells—those ever alert guardians of the body against poisons entering the system by the usual gate of entrance, the portal vein.

"The only preparation necessary is rinsing with water, if the mouth is dry. A hypodermic tablet, powdered with the point of a penknife, on paper creased in the center, and dropped just behind the teeth, the tongue being restored to its normal position, will be absorbed in a few seconds. The full effects of the dose may be absolutely depended on, almost immediately." In emergencies, a morphine and atropine tablet thus administered relieves pain and shock as nothing else will. An apomorphine tablet given in this way will very soon induce vomiting. Compared with hypodermic injection, Paulson considers the perlingual method quicker, easier, safer, cleaner, and far more reliable. It needs no precautions as to sterilization, and can be given by any one without the personal attendance of the physician. The point to remember is that the patient must not swallow until the taste of the drug has disappeared. Cooper [26] and Murtz,[27] from their own clinical experience, endorse all that Paulson has to say regarding the advantages of this method.

Not only the sublingual space but also the rest of the oral mucous membrane, even the back of the tongue, is endowed with absorbent quality, though there is probably a great difference in the ease and rapidity with which various agents are admitted to the circulation through this membrane; and a large number of exact experiments on this important question is urgently needed.

Bachem [28] quotes experiments performed in 1912 on trachiotomized rabbits with ligated esophagus, from whose mouth potassium chlorate was absorbed so that up to 20 per cent of it was eliminated in the urine. Iodine, salicylic acid, phenol, morphine, strychnine nitrate and antipyrine were also rapidly absorbed to an appreciable degree. Barbital sodium, on the other hand, was hardly absorbed at all. Brief experiments on man were negative with iodine, weakly positive with salicylic acid. Mendel [29] asserts that especially the lipoid soluble drugs are easily absorbed from the tongue, when rubbed over its dorsum. While the action of nitroglycerin, when swallowed, is uncertain, 1 drop of a 1 per cent alcoholic solution of it smeared over the tongue acts quickly. Atropine sulphate, strychnine nitrate and other alkaloids in alcoholic solution likewise act as if they had been given by injection. Strophanthin, 2 drops of a 1 per cent solution, applied in this manner, acted in from fifteen to thirty minutes. He had "perlingual tablets" prepared, containing sodium bicarbonate and tartaric acid, so as to obtain rapid disintegration and possibly also the carbon dioxide stimulation of absorption.

There can be no doubt that aromatic spirit of ammonia, rubbed by means of gauze and cotton over the tongue of a collapsed and comatose patient, must give us better reflex stimulation than the mere smelling of it.

An interesting attempt has of late been made to use this method for the introduction into the system of insulin, which, as is well known, does not act when swallowed, because it is destroyed by the digestive ferments.

PERORAL ADMINISTRATION

In General.—In view of the probable importance of perlingual administration, it seems that the term "oral administration" which has hitherto been applied to the swallowing of medicines will have to be changed to "peroral administration"; for surely the giving of drugs on or under the tongue is more truly the "oral" method than swallowing them.

Peroral administration is the most ancient and most convenient method of giving drugs for systemic action. Hence such medicines should always be administered

1. Cohen, Harry: Suppurative Arthritis, New York M. J. **117**: 163 (Feb. 7) 1923.

* This is the tenth of a series of articles on "The Technic of Medication." When completed the articles will be assembled in book form.

25. Paulson, W.: Sublingual Medication, Practitioner **97**: 389 (Oct.) 1916.

26. Cooper, P. R.: A Note on Sublingual Medication, Practitioner **97**: 493 (Nov.) 1916.

27. Murtz, A. P.: Sublingual Medication, Practitioner **97**: 582 (Dec.) 1916.

28. Bachem: Resorption von Arzneimitteln in der Mundhöle, Klin. Wchnschr. **3**: 461 (March 11) 1924.

29. Mendel, F.: Die perlinguale Application der Medikamente, München. med. Wchnschr. **69**: 1593 (Nov. 17) 1922.

perorally, unless there is a distinct advantage to be gained by other methods. Even when the patient cannot swallow, the remedy may at times be most advantageously introduced into the stomach by means of the stomach tube, or by a catheter introduced into the nose (gavage); and, when the patient vomits, the duodenal tube may still make possible ingestion by the alimentary tract. When, however, the remedy deranges digestive functions or digestion destroys the remedy; when there is vomiting and purging, or gastric inflammation or ulceration, the burden of absorption may have to be placed elsewhere. When absorption from the alimentary tract is too slow because of shock, collapse or circulatory stasis, or the emergency is too great, more rapidly acting modes of administration will have to be chosen. As long as a substance simply remains in the alimentary tract, it can merely have a local action on its walls. It cannot affect the cells of the body at large any more than if it were held in the hollow of the hand. This makes evident the importance of studying the conditions influencing absorption, which are:

1. Physical and chemical peculiarities of the substance to be absorbed. As long as a substance remains undissolved, it cannot be absorbed. "Bodies do not act except in solution." Hence solubility is an important factor in absorption. However, drugs insoluble in the test tube may become soluble by the action of the digestive juices, while some that are soluble in vitro may be thrown down in insoluble form in the stomach. Volatile substances penetrate tissues more rapidly than nonvolatile substances. Alkaloids are more readily absorbed than glucosides.

2. Concentration. Substances are more rapidly absorbed when they are swallowed in solution than when taken dry, evidently because of time consumed in solution. On the other hand, the more concentrated the solution, the more rapid its absorption. Pure substances are more quickly absorbed than when inert or insoluble matter is intimately associated with them; thus, morphine is absorbed more quickly when given pure than when given in the form of opium, in which it is mixed with gums and other bodies and from which the morphine must be extracted before it can be absorbed. The pure, active principle should therefore be preferred when general action is desired; the less pure forms, such as extracts, when local action on the alimentary tract is to be elicited; e. g., morphine against pain, opium against diarrhea. It will now readily be seen why a full stomach delays general, and lessens local, action; why, for instance, a certain quantity of whisky on an empty stomach may intoxicate one while twice the quantity taken on a full stomach may not.

3. Vascular conditions of the absorbing surface. Absorption is in direct ratio to the rapidity of blood perfusion in the part. Hence irritants, by increasing the blood supply, favor absorption. On the other hand, absorption is in inverse ratio to the relative quantity of the circulating fluid; hence bleeding or purging, or the intravenous infusion of hypertonic solutions (osmotherapy) favors absorption by depleting the system of fluid, which is then greedily absorbed from any place where it may be available. Absorption from dropsical areas is very poor.

4. Nervous conditions. Shock and collapse, extreme pain and delirium, delay absorption in some manner as yet not completely understood, acting probably, in part, by impairment of the circulation, and in part by delay in the evacuation of the stomach. Under these conditions, drugs must not be pushed beyond the line of safety, for the patient may develop symptoms of poisoning when he rallies from his original condition. Thus, with a patient in excruciating pain or in violent delirium, morphine given by mouth—and even hypodermically—may be so slow in acting as to tempt one to premature repitition of dosage, with resulting morphine poisoning appearing soon after the effect commences to set in. In such cases it is best to call to our aid a differently acting sedative, such as chloroform inhalation, rather than to give a possibly toxic total dose of a powerful remedy.

LOCAL VERSUS SYSTEMIC ACTION

In medicating the stomach and intestine, it must always be remembered that these supply great absorbent surfaces; it is only by insolubility or by nonabsorbability of the medicament that local action can be obtained uncomplicated by general action; thus, bismuth subnitrate gives local action because of insolubility; magnesium sulphate, because of nonabsorbability.

By properly timing the administration, one can make the medicine exert its action chiefly on the gastric wall or be introduced quite soon into the intestine. If the remedy is introduced when the stomach is empty, which is usually the case from half an hour to an hour before meals, it will have maximal action on the gastric mucosa. When the remedy is to act on the contents of the stomach, it should be given immediately before, during or after meals, according to whether its action is wanted during the early, amylolytic period of gastric digestion, or during the later—the proteolytic—period. Another way in which the action of a medicament may be confined to the stomach is to use it in gastric lavage, by introducing the remedy by means of the stomach tube, and withdrawing it before there has been sufficient time for absorption. This is the most rational way of using silver nitrate.

For action on the intestine, the remedy is best given two or three hours after meals, when the contents of the stomach are being emptied into the duodenum. If the stomach is not at all to be acted on, enteric pills or capsules or the duodenal tube may be resorted to. The giving of a remedy should be timed with due reference to the time required for its action. Thus, rapidly acting cathartics are given in the morning, slowly acting cathartics are administered at night, so that in neither case will the patient's sleep be disturbed by the action of the remedy.

For general action, if a single prompt impression is desired, the remedy is best given in fairly concentrated solution, on an empty stomach, and it should be made rather irritating and administered hot, for absorption is more rapid in the presence of hyperemia. If continued action is desired, the remedy is generally best given three times a day after meals, when by reason of the fulness of the stomach it is much diluted, so as to be least irritant to the stomach, and absorbed slowly and more continuously. Substances that interfere with gastric digestion or that may give rise to offensive eructations, as cod liver oil or asafetida, should not be taken until two or three hours after meals. Agents that have a very fleeting effect may have to be given oftener than three times a day, even every half hour; while substances that have very enduring action, like digitalis, need not be taken more frequently than once or twice a day, when it is merely desired to maintain an effect established by more energetic initial administration.

PLEASANT MEDICATION

"Every half minute spent in studying how to make your medicines pleasant is worth half an hour of any other kind of study," says Dr. Cathell in his "Book on the Physician Himself." While one can hardly agree with him in this completely—for efficiency is surely more important than palatability—one merely needs to contemplate the popularity that highly diluted minimal dosages of inoffensive remedies once had to realize that, at least as far as financial success is concerned, this statement may not be so far from the truth.

Let us therefore beware of nauseating doses. Only exceptionally does the disagreeableness of the remedy bring with it greater certainty of success, as is sometimes the case in hysteria, in malingering, and possibly also among those ignorant semibarbarous classes of society who still believe that it takes a "bad thing to drive out a bad thing." Under all other circumstances, everything possible should be done to render medicines pleasant in appearance, odor and taste. Patients at times absolutely refuse to take a nasty remedy. Hence really unpleasant medicines had better not be prescribed without consulting the patient about it. With children, the struggle required to force the dose down the rebellious little throat may at times do more harm than the medicine could possibly do good.

An important reason for the widespread use of proprietary remedies is the attention the manufacturer gives to the elegance of his preparations, and the lack of knowledge in this respect on the part of most physicians.

In prescribing any medicine, the first question should be: Can the medicine be made tasteless? Procuring tastelessness is probably the most successful way of obtaining pleasant medication or, at least, of avoiding unpleasantness. For, after all, appeals to the palate are largely an individual matter. Some people, for instance, like peppermint flavor; others abhor it. To tastelessness there can be no objection, excepting on the part of children, whose palate usually has to be bribed. To be tasteless, the substance must be insoluble in the mouth; but, to be active, it must dissolve in some part of the alimentary tract. Modern chemistry has provided a number of substances at once quite tasteless and yet active, such as albumin tannate, quinine ethylcarbonate and neocinchophen, though there are old substances of similar virtue—reduced iron, mild mercurous chloride, bismuth subnitrate, arsenous oxide.

Unless the substance is tasteless, the only way to render it absolutely tasteless is to encapsulate it. Even pills or tablets are not tasteless unless they are coated. The less expert a patient is in swallowing a pill, the more will he taste it; and the very patient who has difficulty in swallowing a pill is usually a sensitive person whose palate is easily offended. Coated pills or tablets should therefore be preferred to uncoated ones. Of course, the coating must be easily soluble. Gelatin coating probably disintegrates most easily. This does not confine us to the prescribing of manufactured pills, for by means of gelatin capsules any pharmacist can apply to a pill mass as efficient if not as elegant a coating as the manufacturer.

A knowledge of the use of capsules is indispensable to him who aims at pleasant medication. Capsules may be used not only for the coating of pills but also to envelop powders, as well as to enclose liquids. Whenever a solid substance is sparingly soluble, it is better prescribed as powder packed into capsules than as a pill mass; for only thus can one be sure of rapid disintegration. Fluids can likewise be rendered tasteless by encapsulation. Probably all are familiar with the use of gelatin capsules for disguising the taste of oily liquids; it may not be as well known that they can be used for the disguising of the taste of alcoholic or hydro-alcoholic liquids. Of course, capsules filled with such liquids cannot be kept for more than a few minutes, owing to the rapid softening of the gelatin. Any person can fill these capsules for himself by means of a medicine dropper just before taking the dose. In this manner, for instance, the bitter fluidextract of cascara sagrada, which is undoubtedly the most active of the preparations of this drug, can be administered without difficulty.

The progress of pharmacy in the elaboration of highly concentrated preparations, such as extracts and fluidextracts, and, still more, the progress of chemistry in isolating the active principles of drugs, has reduced in the case of most medicines the size of the dose to that of pills, tablets, or the capacity of the ordinary gelatin capsule, and has rendered the prescribing of bulky and nasty preparations, such as infusions and decoctions and even of tinctures, a relic of the past.

There are, however, some remedies the dose of which cannot be reduced any further. If these are oily liquids, and the dose is from one-half to one teaspoonful, the soft gelatin capsule may be resorted to, as a larger lump can be swallowed when it is soft. Most people can swallow without much difficulty an elastic gelatin capsule containing half a teaspoonful; and it is unwise to prescribe a larger one. In the dispensing of larger doses of powders, the cachet holds about the same relation to the capsule that the soft capsule holds in the dispensing of larger quantities of oils.

EFFERVESCENCE

Effervescence is a means of rendering certain medicines, especially salines, more acceptable to the palate and stomach. In lessening taste sensation, it acts chiefly probably by the liberation of innumerable gas bubbles the instant the charged fluid comes in contact with the warm surface of the gustatory mucosa, the tasteless gas physically displacing just that much of contact of solution with membrane. In addition, carbon dioxide is credited with a depressing effect on sensory nerve endings. Effervescence also makes medicaments better borne by the stomach, because it stimulates evacuation of the viscus. To impart effervescence to medicaments of offensive flavor, such as asafetida, is a mistake; for, while it may lessen the disagreeableness of the medicine as it is going down, it increases its tendency to come up from the stomach in the form of nasty eructations.

Heat and cold have a benumbing effect on the gustatory nerve endings, and hence may usefully be added to other means of lessening taste sensation.

Among the drugs that paralyze the nerve endings of taste, none have much practical value. The least objectionable is eriodictyon (yerba santa). It lessens a bitter taste, not sweet, salt or acid, but would have to be used some time before the administration of the bitter medicine to be really effective. Nevertheless, the aromatic syrup of eriodictyon of the National Formulary is a fairly pleasant vehicle for quinine (alkaloid) and other bitter medicines.

(To be continued)

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SATURDAY, MARCH 6, 1926

THE VENTILATION OF SCHOOLROOMS

It is a familiar experience that attempts to initiate progress through change in the varied fields of human interest are likely to run against the barriers of human inertia or traditional beliefs. It is easier to continue in the old ruts; it is not commonly agreeable to adopt radically new views; and it is usually less expensive to avoid innovations that mean the scrapping of old materials and provision of new substitutes. Occasionally the efforts at reform proceed in directions that prove to be unwise; in such instances a reversal of the adopted plans becomes doubly difficult.

This seems to represent the situation that is now confronting the promoters of proper ventilation in public buildings. In an earlier generation carbon dioxide, the waste product in the respiratory gases, was believed to be noxious if present in too large quantities in the atmosphere to be breathed. Presently attention was diverted to alleged organic poisons exhaled and emanating from the human body as the harmful ingredients in a vitiated atmosphere. Although Billings,[1] in 1884, exonerated carbon dioxide, he stressed the hygienic significance of the accumulation of this gas because it "is usually found in very bad company," because small variations in its occurrence were assumed to indicate corresponding variations in the amount of "those gases, vapors and suspended particles which are really offensive," and because variations in the carbon dioxide content of the air can be accurately measured by analytic chemical methods. As a consequence, carbon dioxide began to become a criterion of the hygienic purity of the air. Ventilation requirements were based on the desire to maintain atmospheres containing less than 6 parts of carbon dioxide per 10,000; and presently such intents were enacted into specific laws or regulations governing the ventilation of schoolhouses and other public buildings. This tendency, a logical step, resulted in public enactments in Massachusetts as early as 1902, in New Jersey in 1903, and in New York in 1904. In 1925, twenty-four states had specific regulations or statutory provisions, seven had secured legislation of a general sort, while only seventeen were without some form of legal provision on the subject of school ventilation. As an illustration of the most exacting and specific regulations, the Wisconsin law may be cited. It requires means for positive ventilation of 2 cubic feet of air a minute for each square foot of floor area, and the use of gravity direct-indirect systems is specifically prohibited.[2]

Meanwhile, scientific opinion regarding the fundamentals of ventilation has been entirely revamped. The thermal theory has come into vogue. Neither carbon dioxide nor vague noxious chemical exhalation products nor bacteria are held responsible for the detrimental influence of poorly ventilated rooms. The causes of discomfort are primarily excessive temperature and unpleasant odors. A recent writer[3] has defined the primary purpose of ventilation (in the absence of artificial toxic contamination) as the effort to maintain a comfortable environment for human occupancy. This, he insists, depends solely on the ability of the atmosphere to remove the body's excess heat. Good ventilation consequently results in the maintenance of an atmosphere of such temperature, humidity and state of motion as will cool the human body without chilling it. The most logical standard in use postulates the maintenance of a dry bulb temperature of from 65 to 70 F., and not exceeding 70 F., with an absence of drafts of cold air.

According to the latest findings on this basis, large rooms housing more than from seventy-five to a hundred persons require some artificial device such as plenum ventilation. The most satisfactory installations supply a small volume of cool air moving at a slow velocity and so directed as not to impinge directly on the occupants of the room. The schoolroom presents a problem different from that of an auditorium. Greenburg[3] has pointed out that the physical proportions of schoolrooms in general are such that with the usual number of occupants the heat produced may be dissipated easily without fear of chilling drafts by large quantities of cold air. He frankly argues that the fan system, developed on the basis of erroneous knowledge, should be abandoned because it fails to produce satisfactory atmospheric conditions. Its operation is notoriously poor and wasteful, and the initial cost is high. It is said also to lead to a high incidence of respiratory disease. Greenburg pleads for the window system of ventilation with gravity exhaust, which comparatively is highly efficient and inexpensive.

Among many ventilating engineers, this attack on mechanical ventilation systems, long regarded almost as a panacea for good health in schools, may meet with

1. Billings, J. S.: The Principles of Ventilation and Heating and Their Application, New York, 1884.

2. Winslow, C.-E. A.: The Dead Hand in School Ventilation, Am. School Board J., June, 1925.

3. Greenburg, L.: Necessity for Changes in the Ventilation Laws of the United States, Am. J. Pub. Health **16**: 13 (Jan.) 1926.

resistance. Palmer [4] proposes as ventilation specifications of the schoolroom from a hygienic standpoint the institution of coolness and air circulation, "irregular, fluctuating, intermittent, and, in amount, about half the present standard." Referring to the window ventilation with gravity exhaust, he remarks that we are witnessing the unparalleled situation of sanitarians asking for the privilege of securing health by the expenditure of less money. One may add the strange situation wherein the alleged better mode of ventilation is specifically forbidden by law in certain states and indirectly prohibited in others. Hence it is that "school ventilation still beats against a stone wall clamoring for relief."

THE MAIN FACTORS IN TYPHOID INFECTION

Public health workers in the United States have been so generally accustomed to regard contaminated water and milk as the most common vehicles of typhoid, at least in the past, that it is something of a shock to find the experienced London county medical officer taking the stand that these factors have been overrated and that "some of the historical water outbreaks of cholera and typhoid fever were really in all probability due to fish or shellfish; and that many of the supposed milk and most of the ice cream outbreaks were similarly attributable." The immediate cause of this deliverance was, no doubt, an editorial [5] in THE JOURNAL suggesting that in the United States there is reason to think that when shellfish (oyster) infection now occurs it can be detected more readily than formerly, owing to the subsidence of the great wave of water-borne and milk-borne typhoid, which for a long time obscured the existence of minor sources of infection.

It is not our purpose to controvert the view that fish and shellfish have been important and, perhaps, the most important sources of typhoid in London during the last thirty-five years. In fact, the evidence for an opinion either pro or contra seems hardly adequate. True, the sale in London of small, immature plaice, fried and ungutted, is a possible factor in the dissemination of typhoid. At the same time, the desire to attribute the bulk of London typhoid to this cause appears to lead to unconscious exaggeration and distortion. The list of grouped cases in the London report for 1922 contains too many point blank statements of opinion—e. g., "some food (probably fish) again at fault"; "doubtless a food outbreak"; "very suggestive of food infection"—and no careful analysis of data. It is not convincing to be told flatly that outbreaks which at the time they were studied—e. g., 1894-1897—were ascribed to water or milk were "probably" due to fish. An *idée fixe* cannot take the place of a detailed epidemiologic discussion. Cockles and fried plaice may in some instances be the vehicles of typhoid, but the admission that a particular outbreak was caused by them demands definite evidence.

Moreover, the attempt to interpret the typhoid trend in other localities on the basis of London experience, real or fancied, requires vigorous protest. The history of water-borne typhoid in such cities as Philadelphia, Pittsburgh and Chicago is so plain that he who runs may read. It is almost equally clear and definite that an improvement in typhoid rates in this country has occurred following the general introduction of milk pasteurization. It is strange that in London "milk infection and carrier infection have only in rare instances seriously come into question at all." Probably the relative freedom from typhoid which London has enjoyed for many years has left the number of typhoid carriers at a low ebb; but even so it is difficult to persuade oneself that carrier infection should be so much more unlikely in London than in New York. As regards milk, it would seem that the supply in New York is on a safer basis than that in London. Milk-borne typhoid is by no means unknown in Great Britain, as the observations of Savage [6] and others have shown; and it is not easy to believe that it is altogether absent in London.

In brief, then, an unbiased observer will be prepared to accept the view that cockles, oysters and fried ungutted plaice are a relatively common cause of typhoid in London, but cannot admit that carrier infection, milk-borne infection and similar factors are entirely inoperative, or even materially less operative than they are elsewhere.

Among other interesting items, the London reports mention a number of typhoid cases among nurses—seven in 1922, seventeen in 1923, and thirteen in 1924. This rather high proportion, amounting to more than 5 per cent of all reported cases in 1923, raises the question whether vaccination against typhoid should not be a routine practice in London hospitals as it is in many institutions in the United States.

THE FEMALE SEX HORMONE

In discussing the chemical triumphs to be recorded in connection with the investigation of the organs of internal secretion, reference was recently made [7] to the work of a few prominent investigators in the attempt to isolate the "active principle" in chemically pure form. Our attention has properly been called to the fact that few have attained success in this field without the help afforded by pioneers who paved the way through preliminary efforts, however crude these may have been. We build on the experience of the past. This is true in most branches of science. Some-

4. Palmer, G. T.: Am. J. Pub. Health **16**: 21 (Jan.) 1926.
5. Oysters and Typhoid, editorial, J. A. M. A. **84**: 286 (Jan. 24) 1925.
6. Savage: Milk and the Public Health, London, 1912.
7. Crystalline Insulin—Another Chemical Triumph, editorial, J. A. M. A. **86**: 350 (Jan. 30) 1926.

times a number of investigators working in an essentially independent manner arrive at the same goal almost simultaneously. Through chance announcement, though usually through some striking cogency or excellence of demonstration, the contribution of one person sometimes tends to be emphasized with the apparent disregard of others whose merits are by no means negligible.

This has doubtless been true in the study of the parathyroid function.[8] With reference to the ovary, it was remarked [7] that particularly the work of Doisy lends hope that, even for this gland, chemistry will throw much light on its function as a secretory gland. Here also, for proper perspective, it may be desirable to recall the noteworthy earlier contributions and give them their proper evaluation. The demonstration of a possible hormone-like influence exerted by extracts prepared variously from the ovaries, corpora lutea, follicular fluid, or placenta is by no means new.[9] In 1922, Frank [10] reported that follicle fluid produced hyperplasia of the uterus, vagina and breasts in immature virgin rabbits. The following year, Allen and Doisy [11] elaborated these findings by showing that the lipoid fraction carried this active fraction of the follicle fluid. The last named investigators deserve the utmost credit for having introduced the vaginal smear method of Stockard and Papanicolaou, which is a rapid and simple procedure for assaying the potency of the female sex extracts, into this type of research. The studies have been greatly extended in the chemical direction.[12]

Through demonstrations by a variety of methods, including observations of the effects of extracts on the castrate rabbit, the vaginal smear of the castrate rat, and the spontaneous contraction rate of the isolated rat uterus, it seems likely that follicle fluid, corpus luteum and placenta contain a physiologically identical female sex hormone which induces premature puberty, brings on the sex cycle which in the unimpregnated animal culminates in estrus, but which, if impregnation takes place, reaches its acme in gestation and labor.[13] Thus, Frank and his collaborators explain the seeming incongruity of finding an identical hormone in such anatomically and functionally dissimilar organs as ovarian follicle, corpus luteum and placenta; and they have coined the name "gestational gland" for this trinity which presides over the process of reproduction. Finally, the female sex hormone has been found in the circulating blood.[14] The various investigators engaged in analysis of the complex physiologic situations are not yet agreed as to the participation of the structures other than the follicle. Allen and Doisy have preferred to speak of the "ovarian hormone," whereas Frank and Gustavson, who regard it as also present in the placenta, prefer the designation "female sex hormone." The isolation of the active substance, though still in abeyance, no longer seems beyond the bounds of possibility in the not too remote future.[15]

8. The Parathyroid Hormone—Retrospect and Prospect, editorial, J. A. M. A. **85**: 118 (July 11) 1925.

9. The earlier studies are reviewed by Knauer: Arch. f. Gynäk. **68**: 322, 1899. Iscovesco: Compt. rend. Soc. de biol. **73**: 104, 1912. Aschner: Arch. f. Gynäk. **99**: 534, 1913. Fellner: Ibid. **100**: 641, 1913.

10. Frank, R. T.: The Ovary and the Endocrinologist, J. A. M. A. **78**: 181 (Jan. 21) 1922.

11. Allen, Edgar; and Doisy, E. A.: An Ovarian Hormone, J. A. M. A. **81**: 819 (Sept. 8) 1923.

12. Doisy, E. A.; Ralls, J. O.; Allen, E.; and Johnston, C. G.: The Extraction and Some Properties of an Ovarian Hormone, J. Biol. Chem. **61**: 711 (Oct.) 1924.

13. Frank, R. T., and Gustavson, R. G.: The Female Sex Hormone and the Gestational Gland, J. A. M. A. **84**: 1713 (June 6) 1925. Frank, R. T.; Bonham, C. D., and Gustavson, R. G.: A New Method of Assaying the Potency of the Female Sex Hormone Based on Its Effect on the Spontaneous Contraction of the Uterus of the White Rat, Am. J. Physiol. **74**: 395 (Oct.) 1925.

14. Frank, R. T.; Frank, Marie-Louise; Gustavson, R. G., and Weyerts, W. W.: Demonstration of the Female Sex Hormone in the Circulating Blood, I, Preliminary Report, J. A. M. A. **85**: 510 (Aug. 15) 1925. Loewe: Klin. Wchnschr. **4**: 1407 (July 16) 1925.

15. References to the earlier attempts are given by Doisy; Ralls, Allen, and Johnston (footnote 12).

Current Comment

THE REVENUE ACT OF 1926

The Revenue Act of 1926 is now a law. It abolishes the war tax imposed on physicians under the Harrison Narcotic Act, restoring the normal tax, $1 a year. This effects a saving to the medical profession of approximately a quarter-million dollars annually. Congress refused, however, to embody in the act language making clear the physician's right to deduct the expenses of attending medical meetings and of postgraduate study. The details of the act as they affect physicians are discussed elsewhere in THE JOURNAL. Professional groups other than physicians, dentists and veterinarians did not protest against being taxed for attending professional meetings and for devoting themselves to postgraduate study. This operated seriously against the appeals of the medical profession for relief. The lack of interest displayed might be attributed to the fact that such professional groups attend professional meetings and pursue postgraduate study less frequently than do physicians. Moreover, the ruling of the commissioner denying the deductibility of the expenses of such activities refers specifically to physicians and to no other group. The only redress the medical profession now has lies in an appeal to the Board of Tax Appeals. Such an appeal cannot be taken, however, by the American Medical Association, but must come from some taxpayer aggrieved by the commissioner's ruling. In our contest on tax reduction an element of satisfaction has been the unanimity and energy with which state associations, county societies and individual physicians cooperated toward the desired end. National medical organizations not affiliated with the American Medical Association joined freely in the movement when their attention was called to the situation. The success that was obtained in procuring the reduction of the Harrison narcotic tax may be attributed to this cooperation. To circumstances beyond the control of the profession must be attributed the failure with respect to the expenses of attending medical meetings and of postgraduate study. Out of it all, however, comes the vision of a better united and organized medical profession. This alone is worth even more than the material ends sought.

Association News

ABSTRACT OF MINUTES OF ANNUAL MEETING OF BOARD OF TRUSTEES, HELD IN CHICAGO, FEB. 19, 1926

An informal meeting of the Board of Trustees of the American Medical Association was held in Chicago, February 18, and the regular annual meeting convened the following day, Friday, February 19. All members were present except President W. D. Haggard and Dr. Thomas McDavitt, both of whom were prevented from attendance by illness.

REPORT OF BOARD OF TRUSTEES TO HOUSE OF DELEGATES

The annual report to be submitted to the House of Delegates at the Dallas Session was considered seriatim, before approval. The greater part of the time during the meeting was taken up in the consideration of this report.

COUNCIL ON MEDICAL EDUCATION AND HOSPITALS

Dr. Ray Lyman Wilbur of the Council on Medical Education and Hospitals appeared before the Board of Trustees, outlined a part of the program of that Council, and solicited the cooperation of the Board of Trustees therefor. The response of the Board was favorable to the plans of the Council.

REPORT OF COMMITTEE TO COOPERATE WITH SECRETARY OF TREASURY

Dr. W. H. Mayer presented the report of the committee appointed to cooperate with the Secretary of the Treasury and the Commissioner of Internal Revenue in drafting regulations to govern the distribution of liquor used for medicinal purposes, of which he is chairman. This report will appear as a part of the annual report of the Board of Trustees in the Handbook of the House of Delegates and in THE JOURNAL for March 20.

REPORT OF COMMITTEE ON DISASTER RELIEF

Dr. William Allen Pusey, chairman of the Committee on Disaster Relief, submitted the report of that committee, which also will be made a part of the annual report of the Board of Trustees.

PENDING LEGISLATION

Dr. Charles W. Richardson reported on the status of legislation pending in Congress and designed to extend the Sheppard-Towner Act for a period of five years.

Dr. W. C. Woodward, executive secretary of the Bureau of Legal Medicine and Legislation, also presented a report on this subject.

MEMBERSHIP IN CHAMBER OF COMMERCE OF UNITED STATES

The General Manager of the Association was instructed to apply for membership in the Chamber of Commerce of the United States of America, with a view to securing the legislative bulletins and other services offered by this organization.

SCIENTIFIC EXHIBIT

Dr. D. Chester Brown, chairman of the Committee on Scientific Exhibit, submitted a report of this committee and indicated that the Scientific Exhibit to be installed at the Dallas Session will be unusually complete and of high quality.

APPROPRIATIONS

After consideration by the Finance Committee and the submission of the official report of that committee, the annual appropriations were made by the Board, including larger amounts for both scientific and therapeutic research committees and for bureaus and departments.

COUNCIL ON PHYSICAL THERAPY

Dr. H. B. Williams of Columbia University, New York, and Dr. Frank B. Granger, Boston, were elected to membership on the Council on Physical Therapy. The membership of this Council was increased to eleven members.

ELECTIONS

Consideration of the nominations to fill the vacancies on the Council on Pharmacy and Chemistry, on the editorial boards of the special journals, and on various committees resulted in the following elections:

Drs. Torald Sollmann, L. G. Rowntree and L. B. Mendel to succeed themselves and Dr. A. J. Carlson of Chicago to succeed Dr. Julius Stieglitz (resigned) on the Council on Pharmacy and Chemistry.

Dr. Joseph L. Miller to succeed himself on the editorial board of the *Archives of Internal Medicine*.

Dr. George Miller MacKee to succeed himself on the editorial board of the *Archives of Dermatology and Syphilology*.

Dr. Frederick Tilney to succeed himself, and Dr. Stanley Cobb, Boston, to succeed Dr. Hugh T. Patrick (resigned) on the editorial board of the *Archives of Neurology and Psychiatry*.

Dr. Fritz B. Talbot to succeed himself, and Dr. L. R. DeBuys of New Orleans as an additional member on the editorial board of the *American Journal of Diseases of Children*.

Dr. Isidor Friesner to succeed himself on the editorial board of the *Archives of Otolaryngology*.

Dr. Wallace I. Terry of San Francisco to succeed Dr. Thomas Cullen on the editorial board of the *Archives of Surgery*.

Dr. Montrose T. Burrows to succeed Dr. W. B. Cannon (resigned) as chairman of the Committee on Protection of Medical Research, and Dr. G. W. McCoy to succeed himself on that committee.

Dr. Ludvig Hektoen to succeed himself as chairman of the Committee on Scientific Research.

Dr. E. R. LeCount to succeed Dr. James B. Herrick as representative of the Association on the Division of Medical Sciences of the National Research Council, on expiration of the latter's term of service, June 30, 1926.

Expressions of appreciation were recorded by the Board of Trustees for the very valuable services rendered by Drs. Stieglitz, Patrick and Cannon in the positions which they have held so long, and it was with regret that the Board of Trustees accepted their resignations. Dr. Cullen also had rendered splendid service on the editorial board of the *Archives of Surgery*, and the appointment of a successor was considered only because the editor-in-chief of that periodical now resides in Baltimore, and it was felt advisable to have the Far West represented on this board.

WORLD CONFERENCE ON NARCOTIC EDUCATION

An invitation, presented through Mr. Richmond P. Hobson, president of the International Narcotic Education Association, to the American Medical Association to be represented at a world conference on narcotic education, to be held in cooperation with the Sesqui-Centennial International Exposition, at Philadelphia, July 5-10, 1926, was submitted. It was the sense of the Board that this invitation should be declined, and that the Association should not be represented at the proposed conference.

An invitation was received from the China Medical Association, to be represented at its meeting to be held in Peking, Aug. 31-Sept. 8, 1926. Dr. Charles H. Frazier of Philadelphia, who is to be in China at the time of the meeting of the China Medical Association, was appointed to represent the American Medical Association at that meeting.

WAR RESERVE OF NARCOTIC DRUGS

In accordance with the suggestion of the Committee on Narcotic Drugs, the Board of Trustees went on record urging that so much of the narcotic drugs confiscated by the custom service and the Bureau of Internal Revenue as may be in excess of current needs of the government and as may be necessary to build up a reserve for use of the Army and Navy in time of war be turned over to the War and Navy departments for the purpose of building up such a reserve.

Much routine business was transacted during the session.

The Board adjourned to meet in Dallas, immediately before the opening of the Annual Session.

ANNUAL CONGRESS ON MEDICAL EDUCATION, MEDICAL LICENSURE AND HOSPITALS

Held in Chicago, Feb. 15, 16, 17 and 18, 1926

(Continued from page 631)

COUNCIL ON MEDICAL EDUCATION AND HOSPITALS

FEBRUARY 15—AFTERNOON

Hindrances to University Action in Medical Education

FROM THE UNIVERSITY STANDPOINT

WALTER A. JESSUP, Ph.D., Iowa City: The last quarter of a century reveals marked changes in the field of medical education. This has meant a tremendous readjustment within the universities: 1. It has been necessary to finance these new conditions so as to be able to provide staff equipment and plant according to the higher standards. 2. It has been necessary to develop related work to conform to the premedical requirements and also to afford access to the fundamental sciences through actual teaching and research. 3. It has been necessary to absorb a hard-boiled and inflexible curriculum in the midst of a changing program. 4. It has been necessary to administer this department of the university on an unvarying schedule of hours quite at variance with the rest of the university. 5. It has been necessary to leave the medical program out of the experimental activities characteristic of the best academic practice of the present day.

No one questions the great advance that has been made in medical education and medical service during this period. The reports of the Curriculum Committee in 1908 and the Carnegie Report of 1910 revealed deplorable conditions. All honor to the men who waged this campaign of yesterday. However, it is necessary for us to be ever on the alert as to ways in which we can improve our scheme of education. With the first expansion in the general program of education, there was great faith in elaborate systems of gradation and promotion. Within recent years has come a more widespread recognition of individual differences. When we look at the medical curriculum we find an almost absolute standardization as to the exact number of hours to be given to each of the laboratory sciences and the various clinical branches. Even the entrance requirements are likewise described in arbitrary terms. But little progress has been made in providing for experimentation on the part of the schools, permitting them to capitalize the advantages they naturally have in equipment and personnel. Last year Flexner said that our present fetters were forged in order to compel wretched medical schools to give unfit medical students a better training. Now that that end has been measurably accomplished the means have become a fetish, blocking further improvement. Within the past quarter of a century has come a great increase in the number of medical teachers. Should we not encourage these teachers to assume added interest in experimental questions of sound medical education?

Reading of the reports of this association in recent years leads one to believe that we have too much faith in our power to improve requirements by tinkering with them, adding an hour here and subtracting an hour there. The program of medical education should catch step with the rest of education and be experimented on in a whole-hearted fashion.

FROM THE STATE BOARD STANDPOINT

DR. ELDRIDGE M. SHANKLIN, Hammond, Ind.: The present day medical laws are, for the most part, rather antique; they were enacted at a time when medical education was a more or less haphazard sort of thing. There were a few good schools, as medical schools went in those days; there were many mediocre schools; there were many fraudulent institutions. Medical laws, then, were enacted to cover the three classes just mentioned. Due recognition should be given the monumental work of the American Medical Association through the Council on Medical Education and Hospitals in having so thoroughly surveyed the existing situation and having brought about the great changes that have taken place in the past few years. With the great improvement in medical colleges we find many provisions in the laws that not only work hardships on the modern medical schools but in many cases seen rather effectually to block their progress along certain lines. To the end that these objectionable features may be eliminated, a factor of great importance is that today there is a greater cooperation between the officers of our medical schools and the various state boards. One of the provisions, found in more than a dozen state laws, expressly forbids the appointment of an officer or a teacher connected with a medical school as a member of his state medical board. This was a very wise provision many years ago, but today we find it an unnecessary and an unwise provision.

Proposed changes in the curriculum, the stressing of certain of the subjects, and the minimizing of other subjects are matters of common interest, and with a university connection I am sure the board would be better able to handle the situation. In the question of the curriculum it might seem that the school should have sole authority to make changes. Yet the active, conscientious board member often makes observations in this regard that are not noted by the teacher in the school. Here a school member of the board would be of much service. Another question now being much discussed is that of the continuous school session. The cost of present day medical education is just now being much discussed, as to the cost both in dollars and in time. In fact, many would lower the educational requirements. In this I do not concur; but some provision whereby a student might eliminate one year of time, yet be required to have the same number of credit hours as now demanded, would meet the many objections to the present plan.

Another much discussed phase of our medical laws is that of the required preliminary education. In Indiana we have a provision requiring two years in a standard college or university, or its equivalent. This last clause, "or its equivalent," is one big stumbling block for us. We have never been able to define the meaning of this clause. Board members from other states are in the same dilemma. Many of the so-called minor subjects are neglected by many of our schools. The active board member, through his contact with students from many different schools, is in a position to make certain observations not noted by the school authorities. Here we have a cogent reason for preferring to have a school man on the board. I believe that the school authorities and the medical boards are not, after all, far apart; rather do I feel that our present situation is the result of misunderstanding of the matter and a lack of cooperation.

DISCUSSION

SAMUEL P. CAPEN, Buffalo: Who is to determine the methods and the substance of university education? In the course of the development of university education this question has been answered in two diametrically opposite ways. The first answer was that university teachers and administrators were the final arbiters. This answer could not be the permanent one. In the field of arts and sciences universities ignored the claims of modern life. In the field of professional education, the abuses were still more intolerable. There came then a new dispensation. Its first manifestation was the revolt of the secondary schools. From being the servants of the colleges, they became in effect masters, dictating largely in their turn what the colleges should accept. The other manifestation is represented by the embattled professions. The second answer to the question as to who shall determine the method and substance of university education is virtually this: All interested parties except the university. The answer has not been completely accepted. The American Medical Association initiated the movement to take professional education away from the educators. Lest you think me unfriendly or unappreciative of the extraordinary benefits that have resulted from your twenty years of activity in the educational field, let me say at once that I regard the advance in medical education as the premier achievement of America in the domain of higher training. You furnished the spur that made the achievement possible.

The Association, through its Council on Medical Education and Hospitals, has used for the improvement of medical education four conspicuous devices. The first of these is the definition of a minimum standard for an acceptable medical school. The second device is the classification of medical schools on the basis of their conformity to this standard. The third device is the effort to secure state laws or regulations which specify definite amounts of training in reputable institutions as the prerequisite for licensure. The fourth device is the definition of premedical education and the approval of colleges of arts and sciences qualified to give it. What this movement means for the universities of the country is patent. Unless the universities speedily organize for resistance, they will be forced to surrender to outside bodies entire jurisdiction over what has come to be the largest and most important portion of university training. And all this is happening in a period when every university is awake as never before in history to the importance of pedagogical reforms. Unless I am deceived, you are now ready to accept the help of the universities in correcting these defects. And help is apparently forthcoming. The most promising undertaking in the whole field of professional education is the study of medical education which has just been launched by the joint action of the universities and certain education foundations. Pending the outcome of this investigation, I have but two suggestions to offer. One is that you consider abandoning the prescription of the premedical curriculum. The premedical curriculum is neither general education nor professional education. My second suggestion is that in whatever new standardizing and classifying activities you may undertake, you consider the possibility of giving the principal weight to an estimate of the competence and righteousness of an institution. Medical schools which are genuinely class A schools ought to be trusted. In our whole standardizing procedure we have arrived at the point at which quantitative measures can be almost entirely dispensed with.

DR. AUGUSTUS DOWNING, Albany, N. Y.: When this council of American medical education began its work some seventeen years ago, because of the condition of so many of the medical schools, it did seem necessary to fix a minimum. Then came the discussion of premedical requirements. The medical men, deans of medical schools and others, agreed that three sciences, physics, chemistry and biology, are fundamental, at least a preliminary knowledge of them, to the right study of medicine. As the years went by, we realized that the medical schools were doing their work conscientiously, but were hampered by requiring that anatomy must have so many hours, physiology so many hours, and pharmacology so many hours. I think we have come to a time when the deans and the faculties in the several professional schools should determine the course of study. We took out of our law the provision that nobody should be appointed to a medical board if he was connected in any way with the medical school. We are admitting that in a professional school you throttle progress if you do not give an opportunity for experimentation along various lines. We are experimenting in both medicine and dentistry.

DR. K. P. B. BONNER, Raleigh, N. C.: Taking the boards of the country as a whole, I don't think they would impose any obstacle in the way of development of a model or practical educational curriculum. Therefore, regulatory obstacles might easily be removed. However, statutory obstacles do offer rather a serious hindrance in the way of development of education. Only eleven out of the total number of states prescribe four courses of instruction in separate calendar years. In prescribing forty months or more as the period of time that shall elapse from the beginning of the course, only two states prescribe that by statutory requirement. Sixteen states prescribe that no member of a medical faculty, or one having connection with the medical school, shall be a member of the board. In connection with the requirement regarding preliminary education, only five states lay down a rule requiring two years of work in a standard college, and, at the same time, do not prescribe provisions for its actual requirement; whereas there are only two states in the union which prescribe in detail the medical curriculum outlined in the five points. So it would appear that the differences which exist, or rather the hindrances and obstacles that exist between the boards and the university authorities, might be adjusted.

DR. WALTER L. BIERRING, Des Moines, Iowa: The state boards and the federation standardize medical schools to a certain extent, but not in the complete manner in which it is carried out by the council of the American Medical Association. It has been a great hindrance to medical education for state boards or statutory requirements definitely to determine the curriculum, and particularly the number of hours. Frequently large percentages of mortality have occurred in the state board examinations, which, as a rule, are not very rigid. So there is still some fault in the matter of instruction or proper training for practicing physicians. In the general medical council of Great Britain, which has in its membership the deans of the medical schools, representatives from the British Medical Association, from the profession at large and also from the different examining bodies, they have a very representative and comprehensive body which concerns itself not only with courses of study but also with examination methods. Through personal inspection it is in complete touch at all times with the progress of medical education and the proper qualifications for practice. The same thing is being brought about by such joint discussions as this, by the endeavor of the federation to give this intensive study, by this new commission on medical education, by special examining boards like the National Board of Medical Examiners. Out of this will come more flexibility, more agreement, and a general concord of policy.

DR. CHARLES SUMNER JONES, Buffalo: In Buffalo we have been trying for the last few years to lessen the number of hours given during the four-year course. We think we see our way clear to reduce the number of hours to something like 4,000.

DR. FREDERICK C. WAITE, Cleveland, Ohio: I am chairman of a committee which reported the curriculum for the Association of American Medical Colleges some fifteen years ago. Every member of the committee felt at that time that it was only temporary. About 1917, every one, I believe, was ready to tackle that curriculum and change it. Conditions came about that postponed it. At that time, most of the schools were not educational institutions. They were vocational schools only, affiliated with the university. The state boards do not have enough chance to have contact with the applicant to determine proficiency. They can only determine information. I think that if we can clearly distinguish the two things we want, one information and the other proficiency, and get them separated in our minds, we can clear this up. The ability to think consecutively is of vast importance, and what we want now is not that a man should know this and that fact about anatomy and physiology, but that he should be able to think physiologically, anatomically and pathologically.

DR. AUGUSTUS DOWNING, Albany, N. Y.: New York examines, in round numbers, 1,100 men a year for the practice of medicine. We are trying to work out a scheme by which these 1,100 men shall have a practical examination in diagnosis. I think Dr. Waite is right when he says that what we want is proficient men as well as men well informed. We are trying to work it out in our state so that the men who come in shall show they are at least proficient in diagnosis.

DR. A. T. MCCORMACK, Louisville, Ky.: In Kentucky, we determined to revise our regulations, and we have adopted a list of the reputable medical colleges of the country. We give them entire freedom as to what they do as long as they are on that list, and we recognize all their graduates.

DR. E. P. LYON, Minneapolis: I don't think those restrictions on experimentation are anywhere near as serious as they have been made out. If you have any real plan you want to try you will find you can try it. We have the quarter system and we find we can let a student use any quarter of the school year and make it a legal year without any trouble with the state boards. Then we have had a curriculum arranged for six years, so that one group of

students can graduate in December, after thirty-nine months' registration in the medical school. We have no trouble in licensing those students. If any of them want to go to states which require forty or forty-two months, they have to use their M.D. degree after their intern year instead of the M.B. degree after the thirty-nine months. We tried the student internship for a period of four or five years. Under this, we divided the course into three parts of two quarters each instead of two years of three quarters each. If we didn't meet the class hour requirements in medicine or surgery, we couldn't meet the requirement in some states. We assumed that we had the right to credit the student intern with so many hours of medicine, so many hours of surgery, and so forth, and that the total would be the required number of hours. Two years ago we put into our bulletin an arrangement for an honor course, as we called it; that is, we selected students who might be relieved very largely from the required routine of the curriculum. They chose a department in which they wished to do their major work and went forward under the advice of this department. The only restriction in regard to the other departments was that they should fulfil a minimum of practical work described by that department and pass its examination.

DR. T. J. CROW, Dallas, Texas: Some years ago, the student body of the University of Texas sought through the legislature to be exempt from a state board examination. They said they were graduates of a state institution and, therefore, should be exempt. That of itself appears to me sufficient reason for stating that the members of an examining board should not be members of a college faculty. I believe that the best statutory requirement for medical colleges is the preamble which reads as follows: "Such colleges shall be considered reputable, within the meaning of this law, whose entrance requirements and course of instruction average as high as those of the better class of medical schools of the United States."

ERNEST H. LINDLEY, PH.D., Lawrence, Kan.: It is comforting to certain members of boards to hear that there should be represented on those boards members of the faculties of the different schools. I believe, as a matter of practice, it is bad. It is a very alluring thing for an institution to take part in the government. It carries with it the appareance of power, but it really means paralysis. The university standing off as an advisory element contributes in the long run, I think, very much more to the social need.

DR. ELDRIDGE M. SHANKLIN, Hammond, Ind.: The man on the state medical board is rather set apart when he comes in contact with the group of men in the medical school, and particularly is that true if he meets a group of senior students. When the professors of educational institutions go gunning there is an open season on members of the medical board. My suggestion to you gentlemen who are connected with the medical schools is that you have some talkative member of your state board address your senior class about two or three months prior to the examination on just what the state board is, why it is, and what they may expect of the state board in the next examination.

(To be continued)

THE DALLAS SESSION

Golfers Rally for Trip to Southland Courses

The Golfers' Special provided for physicians attending the San Francisco Session in 1923 struck a most responsive chord. It will no doubt be pleasing news to all those with the golfing urge to learn that a similar train is being provided for the journey to Dallas. This train will leave Chicago, Sunday, April 11, and will provide six days of golf at famous Southern clubs. The general plan is to travel by night and have the days free for golfing and sight-seeing. Wives and children of physicians are welcomed on this trip, and special entertainment in the way of automobile drives, sight-seeing journeys, surf bathing and oyster roasts will be provided. The train is run under the auspices of the Southern Pacific. For details, write to Dr. F. C. Warnshuis, Grand Rapids, Mich.

Medical News

(PHYSICIANS WILL CONFER A FAVOR BY SENDING FOR THIS DEPARTMENT ITEMS OF NEWS OF MORE OR LESS GENERAL INTEREST; SUCH AS RELATE TO SOCIETY ACTIVITIES, NEW HOSPITALS, EDUCATION, PUBLIC HEALTH, ETC.)

CALIFORNIA

Dr. Wilbur's Anniversary.—The Board of Trustees of Stanford University gave a dinner at the Pacific Union Club, San Francisco, January 22, to celebrate the tenth anniversary of Dr. Ray Lyman Wilbur's tenure of office as president of the university; Dr. Wilbur came to that office from his position as dean of the medical school of Stanford University; he is the third president, succeeding Dr. David Starr Jordan and the late Dr. John Casper Banner, and is the first president who graduated from the university. Dr. Wilbur was also recently president of the American Medical Association.

Miscellaneous Items.—The Orange County Health Department, which was the first full-time county unit to be organized in California with support from the International Health Board and the state board of health, began operating, January 1, on its own annual budget appropriated by the county board of supervisors; the budget for this year is $31,000.—— Dr. Theodore Snypp, Auburn, has been appointed health officer of Placer County, to succeed Dr. John L. Fanning.—— The first series of lectures of the San Jose Hospital Association was delivered by Dr. William C. MacCarty, Rochester, Minn., February 9-12, on (1) The Cancer Cell and Nature's Defensive Mechanism; (2) Gastric Ulcer and Cancer of the Stomach; (3) Bone Tumors; (4) Biologic Conception and Classification of Neoplasms; (5) Diseases of the Gallbladder.

FLORIDA

Smallpox Outbreaks.—There were 517 cases of smallpox in the state of Florida reported between Dec. 1, 1925, and Feb. 6, 1926, and more than 150,000 persons vaccinated. The state health officer says in the *Journal of the Florida Medical Association* that smallpox appeared in all parts of the state; he requests the cooperation of every physician in the state to preach vaccination and to vaccinate. Vaccine virus can be obtained from the nearest state laboratory or from the main distributing laboratory at Jacksonville.

Personal.—Dr. Ernest C. Levy, health officer of Tampa, has appointed Dr. William F. Clark and C. W. Eddy, D.V.M., as medical inspector and chief dairy inspector, respectively.—— Dr. Bert W. Caldwell, formerly superintendent, University of Iowa Hospital, Iowa City, has been appointed superintendent of the Gordon Keller Memorial Hospital, Tampa.——Dr. Walton C. Touchton has been appointed health officer of Avon Park.——Dr. William A. Backenstoe, who has spent seventeen years in Africa as a medical missionary, is spending the winter at St. Petersburg.——Dr. John W. Mitchell has been appointed health officer of Sebring.

ILLINOIS

Society News.—The Alton Medical Society has decided to assume responsibility for conducting the crippled children's clinic at St. Joseph's Hospital in that city, and to take over the work done heretofore under the auspices of the Illinois Crippled Children's Society. The clinic will be held weekly, but the local physicians will render assistance whenever necessary at any time.

Medical Liberty League Scout Arrested.—A woman from Chicago representing the American Medical Liberty League was arrested in Champaign, February 16, it is reported, and fined $25 for posting antivaccination posters about the town, and for distributing such things without a permit. The posters are said to have advised persons to refuse to be vaccinated against smallpox and to request them to send stamps to the American Medical Liberty League, Inc., Chicago, for "literature." There were several cases of smallpox, recently, in the city of Champaign, some of them students of the University of Illinois.

Chicago

Personal.—Dr. Martha Tracy, dean, Women's Medical College of Pennsylvania, Philadelphia, was the guest of the Chicago Council of Medical Women, February 10.——Dr. Patrick J. H. Farrell is a candidate for nomination for Congress in the ninth district. For many years, Dr. Farrell has

been closely associated with organized medicine and with the medical units of the National Guard; he served in the Spanish-American War, the Philippine insurrection and the World War.

Society News.—At the next meeting of the Institute of Medicine, Chicago, March 26, at the City Club, the Chicago Surgical Society will be the guest of the institute; the program will comprise the second Lewis Linn McArthur lecture of the Billings Foundation, which will be delivered by Dr. Evarts A. Graham, professor of surgery, Washington University Medical School, St. Louis, on "New Developments in Our Knowledge of the Gallbladder."——Dr. Joseph A. Pettit, Portland, a trustee of the American Medical Association, addressed the Physicians' Fellowship Club, February 19, on "Things Medical in the State of Oregon."——Dr. Maximilian Stern, New York, addressed the Chicago Medical Society, February 24, on "Minor Surgery of the Prostate Gland—New Apparatus and Instruments for Its Extended Application," and Dr. John R. Caulk, St. Louis, on "The Fallacious Orifice —Value of the Cautery Punch Operation." There was a dinner in honor of the speakers at the Hamilton Club, preceding the meeting, and a urologic clinic at the Cook County Hospital in the afternoon.——Dr. Joseph A. Capps addressed the Chicago Council of Medical Women, February 23, at the Women's City Club on "Bacterial Endocarditis."——Dr. Mather Pfeiffenberger, Alton, president-elect, Illinois Medical Society, addressed the Chicago Medical Society, March 3, on "An Inventory," and was guest of honor at a dinner at the society's office preceding the meeting; the meeting, March 10, will be given over to a symposium on exophthalmic goiter in which Dr. George W. Crile, Cleveland, will discuss "Surgical Treatment."——The Chicago Surgical Society met at the University Club, March 5, and at Mercy Hospital for the clinical meeting; among others, Dr. John F. Golden gave a lantern demonstration of "A Study in Bone Transplants."——The March 11 meeting of the Chicago Roentgen Society will be at the Virginia Hotel; the program will be a symposium on brain tumor.

INDIANA

Personal.—Dr. St. Clair Darden, South Bend, was elected president of the Indiana Tuberculosis Association at the fifteenth annual conference in Muncie, February 13.——Dr. Charles F. Bayer has been appointed regional medical officer for the U. S. Veterans' Bureau for the state of Indiana, to succeed Dr. Chester A. Stayton, resigned.——Dr. Paul R. Tindall has been appointed county health officer at Shelbyville.

Reinstatement Refused.—Judge Chamberlin of the circuit court, Indianapolis, has refused the plea of Dr. Winfield S. Rowley of that city to order the state board of medical registration and examination to reinstate his license to practice in Indiana, it is reported. Dr. Rowley's license was revoked by the board, it is said, for having lent his license to a layman, who engaged in the practice of medicine.

Miscellaneous Items.—The Ball brothers of Muncie have donated $500,000 to the Riley Memorial Hospital for Crippled Children, Indianapolis, provided the hospital raises $100,000 by June 30.——The American Proctologic Society will hold its annual meeting in Indianapolis, April 16-17; physicians are invited to attend the meetings.——The Indianapolis Medical Society gave a dinner at the Athenaeum, January 26, in honor of Dr. Augustus G. Pohlman, professor of anatomy and director of the department, St. Louis University School of Medicine.——Dr. William B. Hartsock, Indianapolis, whose license was revoked by the state board following his plea of guilty to violation of the Harrison Narcotic Law for which he served a term in prison, has been reinstated.

MARYLAND

Hospital News.—The Lions Club recently dedicated a ward for crippled children, equipped at a cost of $2,400, at the Franklin Square Hospital; the ward has twenty beds.——The Union Memorial Hospital, Baltimore, will conduct a campaign for $300,000 next October with the assistance of a committee of fifteen, the chairman of which is Dr. John M. T. Finney. The funds will be used to furnish the Johnston Memorial Children's Hospital and Nurses' Home, to pay off a debt on the main building of the hospital, and for general improvements.

Personal. — Dr. John Girdwood, Baltimore, has been appointed medical examiner for the Baltimore City Service Commission; he has been in the U. S. government service for several years, and is the first medical examiner to be appointed in connection with the administration of the local merit system.——Dr. Edward R. Baldwin, director, Edward L. Trudeau Foundation, Saranac Lake, N. Y., gave one of the De Lamar lectures on "The Absolute and Relative Value of Laboratory Procedures in the Diagnosis of Tuberculosis" before the School of Hygiene and Public Health, Johns Hopkins University, February 1.——At the annual meeting of the Maryland State Nurses' Association, January 27, Baltimore, Drs. William H. F. Warthen, head of child welfare work, and Valcoulon L. Ellicott, in charge of vital statistics in the Baltimore City Health Department, gave addresses.——The president of the American Psychopathological Association having resigned, Dr. Ross M. Chapman, Towson, is now the acting president of the association.——Professor Knud Faber of the University of Copenhagen lectured under the auspices of the Herter Lecture Fund, February 18, at the Johns Hopkins Hospital, Baltimore, on "Disturbances of Blood Sugar Regulation."

MASSACHUSETTS

New Society Chartered.—The Malden Medical Association received a charter from the commonwealth of Massachusetts, January 23. The officers are Dr. Charles E. Donlan, president; Dr. Harry J. Weintraub, vice president; Dr. Ray H. Shattuck, secretary, and Dr. Edward G. De Wolf, treasurer.

Hospital News.—The trustees of the Newton Hospital, Newton, have decided to launch a campaign to raise $1,000,000 for additions to the hospital, which last year cared for 3,551 patients, and in which more than half of the city's children have been born. The hospital now has 113 beds, and there has been no expansion of its facilities for twenty years.—— The new $300,000 maternity building for the Lynn Hospital, Lynn, will be ready for occupancy about May 1. It will be fireproof, five stories high, and will replace, in the hospital group, three old wooden buildings.

Registrations Suspended.—According to the *Boston Medical and Surgical Journal*, the board of registration in medicine at a meeting, January 21, took the following action:

Dr. Alfred W. Gwinnell, 1227 Commonwealth Avenue Boston.—Registration suspended for three months from Jan. 21, 1926, for violation of the Federal Prohibition Act.

Dr. Ambrose C. Saunders, 1 Hancock Street, Somerville.—Previous suspension reconsidered. Voted to suspend registration three months from Dec. 10, 1925, instead of one year from Dec. 10, 1925.

Dr. William N. Noyes, 10 Brown Street, Salem.—Registration suspended for three months from Jan. 21, 1926, for violation of the Federal Prohibition Act.

Mortality in Boston.—The total number of deaths in Boston in 1925 was 657 more than in 1924. The death rate was 14.8 per thousand of population, as compared with 14.07 for the previous year; about 17 per cent of the deaths last year were in nonresidents. The number of infant deaths was larger than in 1924; the number of births was 1,326 fewer, giving a birth rate of 23.56, the lowest ever recorded in Boston. The number of persons more than 60 years of age who died in 1925 was larger than for previous years. There was a decrease in the deaths from diphtheria, and an increase in the deaths from typhoid, cerebral hemorrhage, alcoholism, diabetes mellitus and premature birth.

MICHIGAN

Chiropractor Jailed.—J. E. Bacheller, a chiropractor at St. Joseph, was remanded to the county jail, January 22, in default of $300 bail, it is reported. Bacheller was arrested by a state health inspector on a charge of practicing medicine without a license.

Medicolegal Report.—At the January meeting of the council of the Michigan State Medical Society, Ann Arbor, the Medicolegal committee reported that there had been thirty-one "trouble cases" among the members of the state society during 1925, which was less than in any of the three previous years. Eleven suits involving members were tried in 1925, and all of them were won by the committee; in one case, settlement was made by the insurance company, while the trial was in progress. The committee expended in 1925 in attorneys' fees and court expenses $3,350.70, and has a cash balance of $6,309.34. The committee is obligated by a referendum vote of the council to defend in 1926 a libel case involving two members.

Unusual Measles Epidemic.—There were 4,355 cases of measles reported in Detroit in January, as compared with twenty-two in January, 1925; 26 per cent of these were diagnosed by physicians of the city health department, as a result of extra physicians being placed in the schools to look for early symptoms of measles after the holidays. The death rate for measles in January was 1.12 per hundred cases, or a little more than half of the average death rate in Detroit. The city

health commissioner believes that the unusually low mortality in this epidemic was in part due to intensive "measles work" by the department in attempting to detect the cases early, and advising generally that medical attention was necessary for the proper care of the victims.

MISSOURI

Physician Honored.—About 200 residents of Shelbina attended a banquet, January 25, in honor of Dr. Jacob D. Smith, whose seventy-seventh birthday was celebrated. Dr. Smith has practiced in Shelbina for fifty-three years.

Warrants for Unlicensed Optometrists.—Beginning a campaign to rid St. Louis of unlicensed optometrists, warrants were issued, January 24, for the arrest of four, charging them with practicing without a license. The evidence was gathered by the board of optometry and the Better Business Bureau. The four were, it is reported, Carl A. Fuldner, 306 North Grand Boulevard; Otto Bachmann, 209 North Ninth Street; S. Bindler, 1012 Franklin Avenue, and William T. Gallagher, Frisco Building.

Personal.—Dr. William N. Cuthbertson, Liberty, has been appointed county health officer for a term of three years. Dr. Cuthbertson is also the county physician.——Dr. William L. Gist, Kansas City, has been appointed physician to the fire department, succeeding the late Dr. Charles E. Wilson.——Dr. Otto B. Ilch has been reappointed deputy state commissioner of health of St. Charles County for a term of three years; Dr. William W. Vandivert, Bethany, has been reappointed deputy state commissioner of health for Harrison County, and Dr. Paul C. Davis, Moberly for Randolph County.——Dr. Paul C. Morton, formerly of St. Joseph, has been appointed an instructor at Columbia University, New York.

Society News.—A dinner in honor of Col. William A. Wickline, Medical Corps, U. S. Army, was given by Lloyd R. Boutwell, post no. 136 of the American Legion, February 17; Colonel Wickline was stationed at Jefferson Barracks, previous to the World War and during the war was on duty at the St. Louis Medical Supply Depot.——The executive council of the Jackson County Medical Society, Kansas City, adopted a resolution, February 16, disapproving the system of employing medical witnesses in a criminal trial to testify concerning the sanity of the defendant; it was recommended that the law be amended so that the defendant in such cases, when insanity is offered as a defense, be examined by a permanent commission of three alienists to be paid by the state, and to report to the trial judge in the presence of the attorneys for both sides, and to be questioned only by the trial judge, if the jury is present when the report is made.

NEW YORK

Personal.—Dr. Christian E. Petersen, Broad Channel, has been appointed full-time superintendent of the Jefferson County Tuberculosis Sanatorium.——Dr. Matthias Nicoll, Jr., state commissioner of health, addressed the Harvard School of Public Health, Boston, January 14, on health administration.

County Psychopathic Hospital.—The board of supervisors of Westchester County has approved the building of a new psychopathic hospital; the authorization followed a survey of the facilities of the county for the temporary treatment of mental disorders conducted last year by the National Committee for Mental Hygiene and the state mental hygiene committee.

Society News.—The Syracuse Academy of Medicine gave a dinner, February 2, in honor of Dr. Robert A. Hatcher, professor of pharmacology, Cornell University Medical College, New York, preceding an address by Dr. Hatcher on "The Relation of Pharmacology to Rational Therapeutics."——The postgraduate medical clinics of the Nassau County Medical Society will be continued through the month of May; those scheduled for February included two on pediatrics and two on the skin; the clinics have been well attended.——The Saranac Lake Medical Society recently went on record as favoring the local diphtheria prevention campaign in the schools. A statement to that effect issued by the society has been useful in stilling the anxious fears of the parents.

New York City

Opera to Aid Physicians' Home.—Members of the Metropolitan Opera Company will give a benefit performance at the Metropolitan Opera House, April 11, to assist in raising $125,000 to purchase "Downsbury Manor," an estate at Ridgefield, Conn., for a home for incapacitated and aged physicians; the program for the occasion will be an opera; there will be also short addresses, and among those invited to speak are Charles Evans Hughes, formerly secretary of state; Governor Smith; Mayor James J. Walker, and Dr. Wendell C. Phillips, President-Elect of the American Medical Association.

Changes in Academy By-Laws.—The New York Academy of Medicine has changed its constitution and by-laws so that they now provide that a graduate of a duly qualified medical school who submits proper evidence that he devotes full time to teaching or scientific research may have his admission fee waived and pay annual dues of $5; another revision provides that regularly commissioned medical officers of the U. S. Army, Navy and Public Health Service may be elected to fellowship in the academy without paying an admission fee. The twelve special sections of the academy will now furnish abstracts of all papers read at their meetings for publication in the bulletin of the academy which, it is expected, will eventually become the Transactions of the New York Academy of Medicine.

Dr. Lambert Heads New School of Tropical Medicine.—It was announced, February 27, that Dr. Robert A. Lambert, New York, will sail for Porto Rico in March to assume charge of the school of tropical medicine which Columbia University is establishing there. Dr. Lambert recently returned from Brazil, where, since 1921, he had been director of the Pathological Institute at São Paulo. Columbia aims to establish ultimately a great Pan-American medical center, and, with the University of Porto Rico, to cooperate with both North and South America in the conquest of disease. The chancellor of the University of Porto Rico is now in New York conferring with Columbia's officials about organization plans; with Dr. Lambert's arrival in Porto Rico, the enterprise will take definite shape.

Society News.—Dr. Nellis B. Foster addressed the Medical Society of the County of New York, February 24, on "Clinical Differences Between True and False Uremia."——The Yorkville Medical Society held a symposium, February 15, on "Physiotherapy by the General Practitioner."——Dr. Francis M. Pottenger, Monrovia, Calif., addressed the Association of Italian Physicians in America, February 18, at the New York Academy of Medicine on "Some Important Factors Influencing the Curability of Tuberculosis."——The New York Academy of Medicine held a symposium, February 18, at its stated meeting, on "The Significance of Disturbances of Functions of the Bladder."——Alfred N. Richards, Ph.D., professor of pharmacology, University of Pennsylvania School of Medicine, Philadelphia, gave a series of four lectures, beginning February 11, under the auspices of the Herter Foundation at the University and Bellevue Hospital Medical College on "The Physiology and Pharmacology of the Kidney."——The presidents of the five county medical societies which represent the organized medical profession of greater New York and a member of their committees interested in public health met, January 9, to discuss the various problems that will come before them during 1926.——Dr. Harry W. Mayes addressed the Medical Society of the County of Kings, February 17, on "Mercurochrome in Obstetrics: A Report on Morbidity in More Than Two Thousand Cases."——Dr. William E. Caldwell, associate professor of gynecology and obstetrics, Columbia University College of Physicians and Surgeons, among others, gave a lantern demonstration at the stated meeting of the New York Academy of Medicine, March 4, on "Birth Injuries."

Medical Court Cases.—Through the activity of Jacob H. Banton, district attorney of the county of New York, the following medical cases were recently disposed of in the court of special sessions: (1) Pietro Stella, 309 East Fourteenth Street, was convicted of practicing medicine without a license. The evidence developed the fact that the defendant is the nephew of Dr. Giuseppe Stella of 308 East Fourteenth Street, and that the defendant was taking care of Dr. Stella's practice while the latter was in Europe in July, 1925. The complainant, Mrs. Rosina Loforte, testified that on July 6, 1925, she visited the office of Dr. Stella and there met the defendant, who treated her left eye; subsequently the eye was removed at one of the city hospitals. Stella said he would charge Mrs. Loforte $350 for treating her eye and received $50 on account. (2) Barbara C. Horworth, 600 West One Hundred and Sixty-Third Street, a licensed masseuse, was convicted of practicing medicine without a license. The testimony of two policewomen showed that the defendant held herself out as a doctor, saying that she had cured many deaf and dumb persons and many bedridden cripples. She also stated to the policewomen that she had cured the grandson of Jacob H. Schiff of a serious ailment. The defendant made a diagnosis of the policewoman's case and treated her by

rubbing and applying a liquid to her back. The defendant was sentenced, February 15, after an investigation. (3) Antony J. Colagione, prescription clerk in a drugstore at 585 Lenox Avenue, was convicted and fined $100. The defendant told a policewoman that he was a doctor, gave her a prescription for which he charged $1, and sold her medicines for which he charged $2.50. (4) Benjamin H. Steinberg, prescription clerk in a drugstore at 2564 Eighth Avenue, was convicted and fined $100. The testimony of a policewoman showed that the defendant said he was a doctor and gave her a prescription for which he charged $1, and medicines for which he charged 75 cents. The bottle bore the name of a fictitious doctor.

NORTH CAROLINA

Dan Harris Arrested Again.—Dan Harris, a self-styled "painless cancer specialist," was arrested in Raleigh, February 18, it is reported, charged with practicing medicine without a license, following the death of a woman in Greensboro whom he had treated for cancer. In the last ten years, Harris has been indicted on four previous occasions, and convicted and released by the court with a nominal fine three times. A later report of Harris' last arrest has been received to the effect that he was fined $100, which he promptly paid.

Society News.—The Mecklenburg County Medical Society, Charlotte, has established a physicians' exchange for the mutual convenience of its members and the public.——Drs. Guy H. Sumrell and Mark T. Frizzelle recently entertained the Pitt County Medical Society at dinner at Ayden.——The Wayne County Medical Society recently held a memorial service for the late Dr. Wooster H House, Goldsboro.——Dr. Seavy Highsmith was chairman of the committee of the Cumberland County Medical Society, which made the arrangements to entertain the twenty-eighth annual meeting of the Tri-State Medical Association between North Carolina-South Carolina and Virginia in Fayetteville, February 17-18.——The medical staff of U. S. Veterans' Bureau Hospital, no. 60, Oteen, entertained the members of the Buncombe County Medical Society at the hospital, January 18. There was a clinic, refreshments and a social hour.

PENNSYLVANIA

Mental Clinics.—The Bureau of Mental Health, Pennsylvania Department of Welfare announces the appointment of Dr. Thomas M. Barrett, Dixmont Hospital, Dixmont, Pa., and Dr. Gordon F. Willey, Pennsylvania Hospital, Philadelphia, as part-time field psychiatrists. Their duties will be largely as consultants in connection with mental clinics. There are now forty-six clinics under the auspices of the bureau of mental health, and it is expected that such part-time service will make it possible to establish still more.

Society News.—The Pennsylvania Conference on Social Welfare held its eighteenth annual meeting in Pittsburgh, February 3-6; among the subjects discussed were "The County as a Unit of Organization for Social Work," "Interracial Relationships," "New Trends in Social Welfare" and "Adult Delinquency." In connection with the conference there were meetings also with the state conference of probation and parole, the state association of superintendents of institutions for children and other organizations.——Dr. Harvey F. Smith, Harrisburg, addressed the Dauphin County Medical Society, March 2, on the surgical side of pyloric stenosis; Dr. Arthur L. Page discussed the medical side of pyloric stenosis.——The fifth Bedford Lecture will be delivered in April in Pittsburgh by Dr. Beverley R. Tucker, Richmond, Va., on "The Contribution of the Doctor to Literature." Advanced reservations may be made by writing to Mrs. Risacher, 7036 Jenkins Arcade Building, Pittsburgh; the time and place will be announced later.

Philadelphia

Hospital News.—The board of managers and the staff of the Women's Hospital opened the new roentgen-ray department of the hospital with appropriate ceremonies, February 24.

Personal.—Dr. Alejandro Ceballos, an associate professor in the Medical School of the University of Buenos Aires, has been visiting medical schools and hospitals in Philadelphia.——The district attorney has appointed Attorney James W. Tracy to cooperate with the state board of medical education in the apprehension of illegal practitioners of medicine.——Dr. Jacob Solis-Cohen celebrated his eighty-eighth birthday, February 28.

Society News.—The Philadelphia County Medical Society, February 24, conducted a symposium on "Newer Therapeutic Remedies"; Dr. Harry C. Fish discussed "Pregl's Iodine Solution in the Treatment of Arthritis"; Dr. Meyer Solis-Cohen, "Causes of Failure of Specific Vaccine Therapy and Their Correction"; Dr. Harry Lowenburg, "Mercurochrome in the Treatment of Infections in Children"; George W. Raiziss, "The Newer Developments in Chemotherapy," and Dr. John A. McGlinn, "Nonspecific Proteins in the Treatment of Pelvic Inflammatory Diseases."

TEXAS

Health at Houston.—Reports to the Department of Commerce from sixty-eight cities with a total population of twenty-nine million, for the week ending February 20, indicate that the highest mortality rate (33.8) was for Houston and that the mortality rate for the group was 16.4. The mortality rate for Houston for the corresponding week last year was 19.3, and for the group, 14.5.

WASHINGTON

Society News.—The annual dinner of the King County Medical Society was held March 1 at the Olympic Hotel, Seattle; 500 tickets have been issued for the occasion.——Dr. Paul B. Magnuson, Chicago, will be the guest of the Seattle Orthopedic Society at the annual clinic and dinner, March 13-15.

Hospital News.—The governor has signed an "enabling act" which will make it possible for two counties or a city and a county to erect hospitals conjointly.——The Firlands Sanatorium, near Seattle, has opened a new $60,000 building with a capacity of sixty beds for the treatment of tuberculous children; this is a city institution.

Personal.—Dr. Robert N. Hamblen has been elected president of the Spokane Medical Society; Dr. Mitchell Langworthy, vice president; Dr. Robert L. Rotchford, secretary.——Dr. Harriet J. Clark, medical missionary, recently spent a furlough in Seattle, where formerly she practiced for many years; Dr. Clark has returned to Bombay.——Dr. Harry V. Wurdemann, Seattle, a lieutenant colonel in the medical officers' reserve corps, has gone to Washington, D. C., for a two weeks' tour of duty with the general staff.——Dr. Charles F. Eikenbary, Spokane, left that city, March 1, it is reported, for Seattle to take charge of the Children's Orthopedic Hospital.

WISCONSIN

Examinations in the Basic Sciences.—The Wisconsin State Board of Examiners in the Basic Sciences will conduct examinations at the Loraine Hotel, Madison, March 12-13 and September 17-18, and at the Hotel Pfister, Milwaukee, May 28-29 and December 17-18, in physiology, pathology and diagnosis, and human anatomy. Inquiries should be addressed to Michael F. Guyer, LL.D., University of Wisconsin, Madison (THE JOURNAL, June 27 and and Aug. 1, 1925).

HAWAII

Record Health for Troops.—The Surgeon General notes in his weekly review of statistics that the health of the soldiers in the Hawaiian department during the calendar year 1925 was exceptionally good, and better than the record for the preceding year, which was satisfactory. The admission rates for disease, the death rate and the noneffective rate from all causes were lower than in 1923 or 1924. The rate of incidence for venereal disease established a new low record. There was only one case of malaria fever reported, and this, it is said, was probably contracted before the soldier arrived in Hawaii, as was true of the fourteen cases of malaria reported in the Hawaiian department in 1924.

GENERAL

Health Institute Postponed.—According to the Connecticut State Department of Health, the New England Health Institute, which was to have been held at Concord, N. H., May 24-28, has been postponed, the tentative date now mentioned being September 27-October 1.

Accidents in Metal Mines.—According to the Department of Commerce, accidents at mines producing metals and nonmetallic minerals, except fuel, resulted in 418 deaths and 33,118 nonfatal accidents in 1924. Of the total number of accidents in such mines, ten caused permanent total disability, 402 permanent partial disability, and 8,308 disability exceeding fourteen days. Aside from the disaster at the Milford mine in Minnesota in February, 1924, in which forty-one persons lost their lives as a result of a flood, the main causes of fatalities among underground workers were falling roof,

explosives, haulage and falls of persons. There was an increase in the injury and death rates in 1924 over the previous year in underground and open pit operations, and a reduction in the rates for surface shops and yards.

The Darling Prize.—The council of the League of Nations has approved a resolution of the Health Committee of the league to perpetuate the memory of the late Dr. Samuel T. Darling, Baltimore, by establishing a prize to be awarded periodically and to be known as the Darling prize. It will be awarded by the Malaria Committee of the League of Nations to that scientist who has carried out some recent distinguished research work on a subject connected with malaria which comes within the general scope of the commission's investigations. The fund will be collected by private subscription and the interest will be expended on the prize. All contributions will be acknowledged and in due time information concerning the administration of the fund will be furnished each subscriber. Contributions should be sent to the Director of the Health Section, League of Nations, Geneva, Switzerland.

Society News.—Dr. Hans Zinsser, Harvard University Medical School, Boston, was elected president of the Society of American Bacteriologists at the recent annual meeting; Robert S. Breed, Ph.D., Agricultural Experiment Station, Geneva, N. Y., vice president, and James M. Sherman, Ph.D., Cornell University, Ithaca, N. Y., secretary-treasurer.——The annual meeting of the American Society for the Control of Cancer will be March 6 at 25 West Forty-Third Street, New York; five members of the board of directors will be elected, also the chairman, four vice chairmen, and other members of the advisory council; following the business meeting there will be a dinner conference of the advisory council.——At a meeting of the American Conference on Hospital Service, Chicago, February 17, Dr. Frank Billings, Chicago, was elected honorary president; Dr. Sigsmund S. Goldwater, New York, president; Dr. Ralph B. Seem, Chicago, and Mrs. Carl H. Davis, Milwaukee, vice presidents, and Dr. Harry E. Mock, Chicago, treasurer.

News of Epidemics.—Twenty-five students at Phillips Exeter Academy, Exeter, N. H., were reported, February 25, as restricted to the infirmary on account of an outbreak of scarlet fever, which has prevailed at the school for several weeks in mild form.——Among the communities in which outbreaks of smallpox have recently been reported are Roosevelt County, N. M., eleven cases; Gary, Ind., eight cases; Council Bluffs, Iowa, sixty-three cases reported, February 1-15; Alamo, Tenn., eight cases in and near the town; Greenville County, S. C., ten cases, and Scottsville, Ky., twelve cases.——The city health officer of Houston, Texas, is said to have conferred with the Harris County Medical Society, Houston, recently, about an epidemic of influenza in that city.——El Paso, Texas, was reported as having an influenza epidemic, February 5, which caused sixteen deaths in four days; sixty of the public school teachers were absent from duty largely as a result of the epidemic; also 913 of the pupils.——There were 11,801 cases of influenza reported to the state board of health of Mississippi during January; the epidemic continued to extend during February.——More than 1,000 persons in Sodus, N. Y., were said to have been ill with influenza, February 28; the population of Sodus is less than 2,000.

Aliens Admitted to Study Chiropractic.—Protests are being received from state medical boards by the department of labor at Washington against the practice of the bureau of immigration in approving certain schools of chiropractic, which action permits prospective students of those schools to enter the United States as nonquota immigrants. Among others, the Indiana State Board of Medical Registration and Examination protests to Secretary of Labor James J. Davis that the practice of the "healing art in the state of Indiana is a common privilege granted to any citizen that will comply with the law in relation to the practice of the art of healing." It is pointed out that chiropractic schools have not met "the Indiana schedule of minimum educational requirements," and cannot be approved by the Indiana licensing authorities without discriminating in favor of a low standard of education, and against the present established standard of Indiana. The Indiana board further protests the action of the bureau of immigration on the ground that "the teaching of chiropractic schools contravenes the established practice of the cure and prevention of disease, and is inimical to the stability of law and order in this state." This protest raises legal questions, which must be determined by the bureau of immigration; under the administration of Commissioner Husband, it was the practice of the bureau to permit alien students who contemplated a course of instruction in chiropractic to be admitted to the United States to attend such schools, provided the immigration bureau found that the chiropractic school was financially responsible. Commissioner Husband held that it was not the duty of the bureau of immigration to pass on the question of whether or not chiropractic is recognized as an adequate method for the cure and prevention of disease; this has also been the policy of the present commissioner of immigration, Harry E. Hull. It is apparent, in view of the Indiana protest, which is based on the Indiana statute, that the federal immigration authorities may be required to change the ruling which has permitted student immigrants to enter the United States to study at so-called chiropractic schools.

Bequests and Donations.—The following bequests and donations have been announced recently:

The Children's Orthopedic Hospital, Seattle, $5,000, by the will of the late Judge Thomas Burke, Seattle.

The Episcopal Hospital, Philadelphia, $10,000; the Homeopathic and Presbyterian hospitals, each $5,000, by the will of the late John G. Carruth.

Fifty thousand dollars each to the Montefiore Home, the Hebrew Orphan Asylum and the New York Guild for Jewish Blind, and $25,000 to the Home for Aged and Infirm Hebrews, by the will of the late Mrs. Hannah Heyman, New York.

Mount Sinai Hospital, New York, the United Hebrew Charities, the Hebrew Benevolent and Orphan Asylum, each $5,000; the Montefiore Home for Chronic Invalids, $2,000, and the Home for Aged and Infirm Hebrews, $1,000, by the will of the late Albert Lorsch.

The Montefiore Hospital, New York, $1,000, by the will of the late Supreme Court Justice, David Leventritt.

The New York Eye and Ear Infirmary, New York, $5,000, by the will of the late Dr. Dwight W. Hunter, as a memorial to his son.

The New York Skin and Cancer Hospital, $300,000, as a contingent bequest from the estate of the late Ralph Holdem.

St. Joseph's Home for the Blind, Jersey City, $1,000, by the will of the late Nellie Lynn, Philadelphia.

The Lenox Hospital, New York, $837,872, Manhattan Eye, Ear and Throat Hospital, $5,000; the Passavant Memorial Homes, $2,000; the New York Association for Improving the Condition of the Poor, $50,000, and Cornell University, $25,000, by the will of the late Gustav Ulbricht.

About $7,000 to the Women's and Children's Hospital, Chicago, the proceeds of a benefit concert given for the hospital, January 25.

The Union Memorial Hospital, $2,500 by the will of Mr. John S. Gittings, Baltimore.

The Sharon Sanatorium, Sharon, Mass., and the Central New England Sanatorium and Tumor Colony, Rutland, Mass., $150,000, by the will of the late Mrs. Thomas O. Richardson.

The Home for Incurables, Philadelphia, the Blind Asylum and the Friends' Hospital, $32,000, by the will of the late Amanda J. Leslie.

The New York Hospital, New York, $50,000, the Lincoln Hospital and Home, and the Servants of Relief for Incurable Cancer, each $20,000; St. Mark's Hospital, $20,000, and the Home for Incurables, New York, $10,000, by the will of Ella A. Rogers.

The Memorial Home for the Blind, Worcester, and the Perkins Institution for the Blind, Watertown, Mass., each $5,000; the Home for Aged Women; the Home for Aged Men, Associated Charities, Worcester, Tuberculosis Relief Association, and the Worcester Society for District Nursing, each $2,000, by the will of the late David Hale Fanning of Worcester.

The Manhattan Eye, Ear and Throat Hospital, $5,000, and the residuary estate, on the death of her sister, estimated at more than $900,000, to the Presbyterian Hospital, New York, by the will of the late Margaret Elizabeth Griffith.

The New York Orthopedic Hospital, New York, $1,000, by the will of the late Mary L. Willard.

The Brooklyn Home for Consumptives, $1,000, by the will of the late Grace Newman.

The Massillon City Hospital, Massillon, Ohio, $30,000, by the will of the late Mary E. Russell.

Hospital of St. Elizabeth of Hungary, New York, $6,000, the New York Society for the Relief of the Ruptured and Crippled; the Servants of Relief of Incurable Cancer; St. Vincent's Hospital; New York Ophthalmic Hospital; Manhattan Eye, Ear and Throat Hospital; New York Cancer Hospital; Metropolitan Throat Hospital; French Hospital; St. Joseph's Hospital, each $7,500, by the will of John McCaffery.

The New York Hospital, New York, $50,000; the Lincoln Hospital, New York, $25,000; the Servants for the Relief of Incurable Cancer, $25,000; St. Mark's Hospital, New York, $20,000; the Home for Incurables, New York, $10,000, by the will of the late Columbus B. Rogers, and that of his daughter, Ella, recently deceased.

The New York City Cancer Institute, $10,000, by the will of Mrs. Annie Lendrock.

The Southampton Hospital, $3,000, and the Greenport Hospital, $2,000, by the will of the late Mrs. Harriet J. Sayre, Southampton, L. I.

The Jewish Hospital, Association and Federation of Jewish Charities, Philadelphia, each $25,000, under the deed of trust created by the late Benjamin W. Fleisher.

Frederick Brown has donated $100,000 to the Jewish Hospital of Brooklyn.

By the will of Mr. Oliver C. Simont, recently probated, the Children's Hospital School and the Home of Incurables each received $2,000, and the Hospital for Consumptives, Towson, $1,000.

The Culver Union Hospital, Crawfordsville, Ind., $20,000, by the will of Mrs. Mary Culver, St. Louis

The Coatesville Hospital, Coatesville, $5,000, by the will of the late Miss Charlesanna L. Huston, Germantown, Pa.

The will of the late Miss Elizabeth D. Barclay, whose estate amounted to about $200,000, contained bequests to endow beds in hospitals, and bequeathed a share of the residuary estate to the Philadelphia Orthopedic Hospital for the purchase of appliances and instruments for the care or comfort of deformed or crippled children.

St. John Guild's Seaside Hospital, New York, $2,500, and St. Bartholomew's Hospital, New York, $10,000, by the will of the late Mrs. Mary de Silver Lord.

The Babies Hospital, New York, and Columbia University, each $25,000, by the will of the late Dr. L. Emmett Holt.

LATIN AMERICA

Personal.—Prof. A. Rocha Faria was tendered an ovation on the day he completed fifty years of service in the Santa Casa at Rio de Janeiro; a tablet and portrait were unveiled, a gold medal was presented to him, a pension was provided for, and a prize was endowed in his name for the best work of an undergraduate.——The *Paris médical* states that Dr. Cranwell, Buenos Aires, has been elected a foreign Fellow of the French Société de chirurgie. Dr. Lamotte of Antwerp was elected at the same time, while Drs. Rio Branco, Brazil, M. Algovin, Peru, and Bessim Omer Pasha were appointed foreign correspondents.

FOREIGN

Spontaneous Cure of Cancer.—Dr. O. Strauss, Berlin, is appealing to all physicians to aid him in compiling and studying instances of the spontaneous cure of malignant disease; what factors might possibly have cooperated, and whether some other disease may not have simulated cancer. The work is being done under the auspices of the German Anticancer Society. His address is 19 Kesselstrasse, Berlin N4, Germany.

New Medical School in India.—The King Edward VII Memorial Hospital and the Seth Gordhandas Sunderdas Medical College at Bombay were opened by the governor with appropriate ceremonies, January 22. The medical school will accommodate 300 students and the hospital 304 patients, with provision for expansion to 400 without overcrowding. These institutions cost in the neighborhood of $3,000,000, which was contributed by the government, the municipality of Bombay, and many individual benefactors; they are of the most modern construction and design, fully equipped and ably staffed; their completion is a great step forward in medical education and treatment of the sick in India.

Personal.—Dr. Edward Halford Ross, London, a member of the council of the Industrial Welfare Society, has gone to South Africa for a year to observe miners' phthisis on the Rand; he will also go to India to promote measures against malaria and mosquitoes in the tea-growing districts of Assam. Dr. Ross was formerly health officer of the Suez Canal.—— Dr. R. Kienböck, professor of medical radiology, Vienna, has been elected corresponding member of the Radiological Society of North America.——Dr. Berze has been placed in charge of the newly organized consulting station at Vienna for nervous and mental diseases.——The Budapest Journal *Therapia* has issued a special souvenir volume in honor of the internist Prof. A. von Korányi, to which forty-eight scientists in different countries have contributed.——Dr. Lutrario, Rome, is the representative of Italy on the Health Board of the League of Nations, and on a recent trip home he was presented with a gold medal by the officials of the public health service.——Dr. Hamel, Berlin, recently inaugurated the radio broadcasting service for postgraduate courses. Twenty minute talks on ileus and the latest discoveries in medicine were broadcast by Professors Körte and Adam. The series is to be continued on the second and fourth Fridays, from 7:30 to 8:15, wave length 1,300.——Prof. A. A. Friedländer, Frankfurt, was in charge of the recent two day medical postgraduate course at Berlin on quackery. It was sponsored by the German Antiquackery Society, which held its annual meeting here.——The *Lancet* states that Dr. C. G. Seligman, professor of ethnology at the university of London, has been awarded the Rivers memorial medal for 1925, for anthropologic work done in the field (New Guinea, Ceylon and the Sudan).——The Italian Dermatologic Society has elected to honorary membership Professors Buschke, Berlin, and E. Hoffmann, Bonn.

Deaths in Other Countries

Charles Plumley Childe, vice president and formerly president of the British Medical Association, consulting surgeon, Royal Portsmouth Hospital, Portsmouth, England, author of "Cancer and the Public," "The Control of a Scourge" and of many articles in British medical journals, died January 30, of heart failure following pneumonia and influenza.——Dr. **O. Stoerk,** Vienna, professor of pathology and director of the institute for pathologic histology and bacteriology, aged 56.—— Dr. **A. von Ins,** Berne, privatdozent for dermatology and syphilis, aged 77.——Dr. **W. Autenrieth,** Freiburg, professor of medical chemistry, aged 63.—— Dr. **Kamil J. Lhotak,** Prague, professor of pharmacognosy, aged 49.——Dr. **O. Piffl,** also of Prague, professor of otology and rhinology, aged 60. A *Festschrift* had been prepared to honor his sixtieth birthday. He died on the day it appeared, the birthday itself.

Foreign Letters

LONDON

(From Our Regular Correspondent)

Feb. 6, 1926.

Education of Children Suffering from Defective Vision

The Council of British Ophthalmologists has issued an important report on the education of children having defective vision. It considers that special educational facilities are required for those for whom the ordinary school education is unsuitable; e. g., children with progressive myopia, defective vision due to corneal opacities, or congenital abnormalities. Classes that give such facilities exist, and are termed by the board of education "schools for the partially blind." This term is undesirable, as it gives offense to parents and may leave a stigma detrimental to the child in after life. The term "myope class" is already in use, and connotes the purpose for which this form of education is designed. It has been found that the best interests of these children are served if such classes are held in association with elementary schools, because the oral teaching and physical exercises given in the ordinary classes are available for the children. By this system association is fostered between those with defective sight and normal children. As the children in these classes are of various ages and educational standards, individual teaching is essential, and it has been found advisable to limit the number of children in each class. The system of teaching by means of "myope classes" may seem to limit education so far as high scholastic attainment is concerned, but it has been found undesirable to encourage these children to follow a higher education, with the prospect of a sedentary occupation, thus incurring grave risks of serious breakdown later in life. In London there are now forty-one "myope classes," providing accommodation for 915 children. In the rest of England there are four "myope schools," and provision for other children with defective sight is made in special classes and in schools for the blind. Such provision is seriously inadequate. In country districts where the number of children with defective sight is insufficient to form special classes, some provision should be made either to send them to one of those classes in the nearest town or for their teachers to receive instruction in their management. The council endorses the recommendation of the departmental committee on the causes and prevention of blindness that further provision should be made by education authorities for the education in myope classes or by similar methods for children with serious defects of vision requiring such facilities, and that steps should be taken to discover these cases at such an early age as will allow of preventive measures being adopted. The council therefore recommends that: 1. Children with defective sight should be examined periodically by an ophthalmic surgeon, who should prescribe the necessary treatment and educational regimen. 2. In all large centers of population, special classes should be established for children with such defective sight as renders them unsuitable for ordinary school education. These classes should be associated with the ordinary elementary schools, and limited to a nominal roll of twenty children to each class. 3. In country districts where there are not sufficient children to form a "myope class," instruction should be given to teachers and parents on the education and management of children with defective sight.

Facilities for Prolonged Treatment of Rheumatic Infection in Childhood

An important report on rheumatism in childhood was submitted to the Metropolitan Asylums Board by Dr. W. T. Gordon Pugh, chief medical officer of the board's children's

and surgical tuberculosis services. In 1923, one eighth of the deaths in England and Wales were registered as due to heart disease, and it has been estimated that one half of all cases of heart disease are of the rheumatic type. At Bristol, Dr. Carey Coombs found that, in two thirds of his cases, rheumatism commenced between the ages of 5 and 15. It follows that in childhood it is eventually responsible for one twenty-fourth of all deaths. Insufficient attention has been paid by health authorities to the prevention and treatment of rheumatic fever in children. Rheumatic fever is exceedingly rare in infancy and uncommon under the age of 5. After 5 it is not only one of the most frequent diseases of childhood but one of the most serious, differing from the same disease in adults in that joint affection is much less prominent. There are six London children's hospitals. The five that publish annual medical reports contain 706 beds. In 1924 these received 10,096 inpatients, of whom 377 (3.7 per cent) suffered from rheumatism or its effects (rheumatism, 99; morbus cordis, 117; chorea, 161). The pressure on the accommodation of voluntary hospitals calls for a somewhat rapid passage of patients, and the average stay, omitting cases of adenoids, varies from twenty to thirty days. The stay of rheumatic patients is generally longer; at the Hospital for Sick Children, Great Ormond Street, it averaged sixty days in 1919-1920. Some children's hospitals have their own convalescent homes and are able to transfer a small number of their rheumatic patients to them; a few patients are transferred to special country homes of limited accommodation; sometimes it is necessary to send these patients home to await vacancies. Physicians have long lamented the necessity for the premature return of rheumatic patients to their homes. Many patients are treated at general hospitals, but as children are not separated from adults in the statistics, it is not possible to ascertain the number. The difficulty of providing for adults treatment of sufficient length is even greater than in children's hospitals. Poor-law hospitals take a large part in the treatment of acute cases. From these hospitals they are transferred to country hospitals under the Metropolitan Asylums Board, which controls all fever hospitals. A memorandum from the Invalid Children's Aid Association submitted to the London County Council points out two practical difficulties in obtaining treatment in the board's county hospitals; viz., the natural objection of self-supporting parents to application to the poor-law and the almost insuperable difficulties in the path of a direct transfer from the wards of a voluntary hospital to these institutions. It suggests that the council should take beds in voluntary homes for heart cases, and recommends that direct admission to the board's hospitals should be arranged to avoid the intermediate agency of the boards of guardians. Last year, in a report on rheumatic diseases among insured persons, Sir George Newman, principal medical officer of the ministry of health, said that children suffering from rheumatic infection are better for early hospital treatment, and that there is need for more institutional accommodation. They should not be mixed with other invalid children, but dealt with in separate open-air hospitals or residential recovery schools, where cooperative research can be undertaken into differential diagnosis and causation, and where suitable treatment, training of the body, education of the mind, and prolonged convalescence are available. Having considered Dr. Gordon Pugh's report, the Metropolitan Asylums Board adopted his suggestion that accommodation for rheumatic children should be provided at Queen Mary's Hospital for Children, Carshalton, Surrey.

The Archives of Disease in Childhood

A new children's journal is about to be published. For some time it has been felt that English work in pediatrics is inadequately presented by existing publications. The object of the new journal, the *Archives of Disease in Childhood*, is to collect and publish the work being done here in this sphere which is overlooked and ill appreciated both at home and abroad. The first number will be published in February. It will be edited by Dr. Hugh Thursfield of London. There is a general committee representative of the principal medical centers. The journal will be well illustrated. The first number will contain a colored plate to illustrate a paper on hepatic cirrhosis in children by Dr. Poynton and Dr. W. G. Wyllie. The *Archives* will appear every second month, and the annual subscription is $6. The titles of the articles of the first number are: "Hepatic Cirrhosis in Children, with Especial Reference to the Biliary Forms"; "Adrenals in Severe Rheumatic Heart-Block"; "Pes Cavus"; "The Incidence of Rickets in a London Hospital Outpatient Department"; "The Clinical Diagnosis of Rickets in Infancy"; "A Study of Rickets: Incidence in London"; "Recent Advances in the Diagnosis and Treatment of Purpura Haemorrhagica"; "Ketonuria and Urinary Acidity"; "Immuno-Transfusion," and "Measures in Infant Feeding."

Food Preservation

The report of the food investigation board, giving the results of the further examination of scientific problems arising out of the handling and preservation of food, has just been issued by the department of scientific and industrial research. It relates to investigations carried out during 1924 mainly on the freezing of beef, the use of low temperature and of carbon dioxide in the preservation of fruit, and the preservation of eggs. Dealing with the theory of freezing, it is pointed out that, when meat is frozen, water separates out as ice on the outside of the muscle fibers, and when the mass is thawed drains away, carrying with it in solution a certain amount of nutritive material. This bleeding, or "drip," as it is called, is more copious with beef than with mutton. The reason for the difference is unknown, though it may in part be due to the slower rate of cooling of the larger carcasses. When beef is frozen rapidly enough, the separation of water is totally suppressed, and the thawed product is no different from fresh beef. The aim in the further investigation of the problem is to discover another method of freezing. The results achieved in regard to meat and eggs are described, and, with reference to the preservation of fruit and vegetables, it is stated that fundamental work has been continued on the effect of orchard conditions and the age of the tree on the storage qualities of apples. The study of the nature and biologic significance of the volatile products produced during storage has also been continued, and investigations bearing directly on commercial practice include comparison of the relative efficiency of "gas" and cold storage of fruit, further study of rot-forming fungi, and the effect of orchard conditions on the resistance of fruit to such fungi.

VIENNA

(From Our Regular Correspondent)

Jan. 9, 1926.

Increase of Worm Infestation in Austria

During the last twenty or thirty years, there has been in Austria a distinct increase of affections due to intestinal parasites. Therefore, the Vienna Medizinisches Doktoren-Collegium recently gave a course of instruction on the subject. Drs. Neurath and Bauer delivered the lectures.

Incidence of Typhoid in Austria

An epidemic of typhoid in the vicinity of Vienna, though confined to three localities, gave rise to a considerable number of cases and caused public alarm before it was suppressed. From recent statistics published by Dr. Peller it may be observed that, in 1919, there were 3,944 cases of typhoid reported in Austria, resulting in 536 deaths; in Vienna alone

there were 701 cases with 170 deaths. In 1920, there were 2,761 cases with 315 deaths; in Vienna, 478 cases with 109 deaths. In 1921, there was a marked increase in the incidence: 4,268 cases with 404 deaths; in Vienna, 530 cases with 121 deaths. The next three years, from 1922 to 1924, inclusive, show considerable decrease:

Year	Total Number of Cases	Number of Fatal Cases	Number of Cases in Vienna	Number of Fatal Cases in Vienna
1922.....	2,303	241	419	85
1923.....	2,043	250	383	49
1924.....	2,285	196	445	68

The high mortality in Vienna is due to the fact that the severe cases in the rural districts were frequently brought to the hospitals for infectious diseases, in that city, while the milder cases were retained in the provincial hospitals or were kept at home. Statistics of the ministry of health show that there are certain regions in which typhoid is endemic, whereas Vienna seldom has other than sporadic cases. The endemic character of the disease in certain rural sections is doubtless due to the fact that there is no supervision of sanitary and prophylactic measures by health officers. As yet, no legal measures can compel a typhoid patient to be brought to a hospital. Another weak point is the fact that the private practice of the health officer may cause a conflict between private interests and public duty. In order to avoid such a situation, it has been urged that, in the event of epidemics, health officers from outside be called in to assume control.

Deaths Among the Staff of University Professors

During the last two weeks, the University of Vienna has lost by death three of its best known professors. Professor Pollitzer, in spite of the fact that he attained only the age of 48, contributed much to the present established position of the Vienna school in the study of metabolism. His researches on gallbladder function, peptone solutions, arrest of hemorrhage in tuberculous patients and on insulin have served to establish his reputation. During his investigations, he became infected with tuberculosis, and succumbed after both lungs and larynx had become involved.

Prof. J. Bartel was known for the originality of his genius. He succumbed to a rapidly developing attack of pneumonia. At the beginning of his career, he devoted himself to pathologic anatomy, and, as assistant director, and, later, as director, of the pathologic institute of the Vienna General Hospital, he remained for twenty-five years in the same position. He studied the relations between constitution and disease. His three chief investigations concerned the lymphatic system with relation to tuberculosis, the reciprocal relations between climate and meteorology, and mortality in relation to morbidity.

The third loss that the university faculty has sustained is the passing of Prof. Karl August Herzfeld. He was sprung from a Vienna family that has produced many physicians. He was graduated in medicine in 1885, and, for many years, served as assistant to Professor Langer, who occupied the first chair of anatomy. Later he became assistant to Professor Schauta at the Frauenklinik, or women's hospital, where he soon became the most capable operator. During that period, he wrote an illuminating textbook "Der Geburtshelfer" (the obstetrician). He soon developed a private practice so extensive that he scarcely found opportunity for research. Nevertheless, he continued to contribute articles on operative technic, the cancer problem, the theory of eclampsia and theoretical problems of birth mechanism. Since 1911 he had served as the director of a special hospital, and he was regarded as one of the leading gynecologists of Vienna.

PRAGUE

(From Our Regular Correspondent)

Feb. 1, 1926.

Death of Professor Lhotak

The Czech Medical Faculty of Prague suffered another loss, January 27, when Prof. Kamil Lhotak, professor of pharmacology and pharmacognosy at the Charles University, died of cancer of the stomach. He was born in Prague in 1876 from an old Bohemian family. He obtained his medical degree at the Czech Medical Faculty in Prague. Shortly after his graduation he became interested in the study of physiology and became assistant of the Prague physiologist Dr. F. Mares. Later on he became a right hand man of the founder of Czech pharmacology, Professor Chodounsky. In 1905 he became lecturer and in 1914 professor of pharmacology, in which capacity he served to the premature end of his life. He devoted himself to the study of physiology of muscle, the action of heart muscle under the influence of chloroform and ether, and the active substances of digitalis. He published two big manuals for students, one of them on pharmacology; the other, on pharmacognosy. Because he lectured not only to the medical students but also to the candidates of pharmacy, he exerted a strong influence on the use of drugs. He believed that by the use of proprietary and "patent" remedies both physicians and pharmacists became mere agents of the chemical industry. Professor Lhotak served on most of the committees of the medical faculty, and worked out the plans for the concentration of the buildings of the Czech Prague Medical Faculty. Shortly before his death his institute moved into a new building, perhaps better than any other pharmacologic institute on the continent. He was interested in the history of Czech medicine and was an anthority on the life and work of the Czech physiologist Jan Purkyně.

Mortality from Tuberculosis

Dr. F. Skalnik's recent analysis of tuberculosis mortality for the province of Moravia shows an increase in the last years of the World War but a decline in the postwar years. The curve, then, resumes the slope it presumably would have taken if the war had not caused an interruption. According to Dr. Skalnik's explanation, two main factors come into play in the causation of tuberculosis mortality: one factor is hygiene; the other factor is the action of the Koch bacillus on the human race. During the war, the first group, hygienic care, almost collapsed. When conditions improved somewhat, the second factor became dominant. Dr. Skalnik believes that the after-war drop of tuberculosis mortality is not the result of the antituberculosis campaign. He predicts that the coming fight to lower the mortality will be more difficult because now only specific weapons against the tubercle bacillus will avail. The Health Committee of the League of Nations is studying the same topic on the basis of international statistics.

Death of Professor Piffl

Prof. Dr. Otto Piffl of the Prague German Medical Faculty died, January 19. He was one of the most famous specialists on diseases of the ear, nose and throat in central Europe. He died on his sixtieth birthday, the day on which the Prague German Medical Faculty was to publish a memorial volume containing contributions from his pupils. He was born in 1866 in Lanskron, Bohemia, and obtained his medical degree at the Prague German Medical Faculty. He became assistant to Professor Zaufal, who was at that time the chief of the ear clinic in Prague. In 1906 he was appointed assistant professor and in 1907 became chief of the German ear clinic in Prague. His special field was surgery of the brain necessitated by complications of inflammatory processes of the ear. He was the president of the Association for the Study of the

Diseases of the Ear, Nose and Throat in the Czechoslovak Republic. Many foreigners came to Prague for his advice and assistance.

Sixtieth Birthday of Professor Ghon

The German Medical Faculty in Prague announces that Prof. Anton Ghon has achieved his sixtieth birthday. He is the chief of the Institute for Pathological Anatomy of the German Medical Faculty in Prague and since the death of Professor Jaksch has been the leader of the teaching staff of his faculty. He was born in Villach, Austria, and obtained his education in Vienna. He was a favored pupil of Professor Weichselbaum, who sent him to Prague when Dr. Chiari died. Since then he has occupied the chair of pathologic anatomy. He took part in an expedition to India for the study of bubonic plague, from which originated a monograph on the same topic. His name is also closely connected with the social and pathologic study of tuberculosis. He is the founder and editor of the Prague edition of the *Medizinische Klinik* and a prominent member of most of the scientific bodies in Prague.

Housing Shortage in Prague

When Prague became the capital of an independent state to which many of the central authorities transferred their place of residence, the housing shortage became very acute. During the war practically all building had been brought to a standstill. Later on new government office buildings were erected, and with the aid of state funds also the construction of private apartments was stimulated. In spite of these measures, the housing shortage continued, especially for the poor. Last year a movement set in among those most in need to provide housing accommodations for themselves. As a result, large colonies of huts sprang up on the outskirts of the city in spite of the efforts of authorities to suppress the movement. In some instances old railroad cars were used, but most of the huts were built by the inhabitants themselves from material that they were able to get together. Naturally, with sanitary equipment lacking in these colonies they develop into dangerous foci of infectious diseases, including typhoid. These colonies grow because they attract not only those who entirely lack shelter but also those who possess an apartment but are willing to turn it over to another family for a considerable reward. Therefore, a considerable sum has been appropriated for the construction of small apartments for the poor. In the meantime, an effort will be made to improve the sanitation in the present colonies, for it is anticipated that several years will elapse before the colonies will completely disappear. In all these colonies, all sorts of animals are being kept which give rise to further nuisances. Recently a census of animals in Greater Prague revealed a considerable number of animals kept within the boundaries of the city. The city, which has a population of about 700,000, shelters also 6,813 horses, 319 sheep, 3,574 cows and oxen, 4,797 goats, 3,531 pigs, 14,922 rabbits and 61,933 poultry. A considerable number of agricultural communities was incorporated into the city when Greater Prague was formed. Nevertheless, the number of animals kept in the city is too high. A drive is also planned by the city health authorities against this nuisance.

Insurance and the Public Health

Dr. F. J. Boudreau, originally from the state health department of Ohio and the present assistant director of the commissariat of the health committee of the League of Nations, has recently visited Prague for the inauguration of a study which was proposed by the Czechoslovak delegation to the League of Nations. The study is to determine the relationship of sickness, invalidity and old age insurance to the official public health machinery, and to investigate the possibilities for closer cooperation. The proposal grew out of the observation that the large sums of money involved, if properly directed, could aid in the promotion of national health. A committee was formed in Prague to make a preliminary inquiry into the question and present its preliminary report to the spring meeting of the council of the league.

ITALY

(From Our Regular Correspondent)

Jan. 3, 1926.

The School of Colonial Pathology at Bologna

Discussing the activities of the school of tropical medicine, Dr. Sarnelli stated that the school was established a year ago at the University of Bologna, to provide instruction for physicians who are planning to go to the colonies. The directorship was entrusted to Prof. Giuseppe Franchini. Instruction has been given in appropriate subjects and has been combined, as opportunity offered, with laboratory practice. Many patients with tropical diseases presented themselves at the school and became subjects for study. Many of these came from the locality in which the school is located, some as the result of the antimalaria and the antidysentery campaigns; others were workers on railway construction, and infested with intestinal parasites; still others were workmen returned from the colonies.

Appointment of New Rectors in Italian Universities

Senator Agostino Berenini, who for many years has been rector of the University of Parma, has resigned and has been succeeded by Prof. Camillo Callenga.

Professor Severi has resigned from the rectorship of the University of Rome, Professor Giorgio Del Vecchio having been chosen as his successor.

Prof. Filippo Bottazzi, director of the institute of physiology and biologic chemistry, member of the Accademia dei lincei, and honorary professor of the University of Edinburgh, has been selected to succeed Professor Zambonini in the rectorship of the University of Naples.

At the University of Pisa, the office of rector has passed from the hands of Professor D'Acchiardi to Prof. Vittorio Aducco, director of the Institute of Physiology.

The Introductory Lecture of Professor Gayda

Accepting a call from the University of Cagliari to the University of Bari, Professor Gayda delivered, December 5, his introductory lecture on "Modern Views on Nerve Excitability." He first defined the conception of excitability in general, and then gave a synthetic exposition of the facts that have been demonstrated by various authors in recent years with regard to the excitation of motor nerve, dwelling more particularly on the researches of Lapicque and his school on the chronaxia and on the studies of Lucas on the course of the recovery of motor nerve after the passage of an excitation.

Italian Physicians Resident in Foreign Lands

The national institute for the economic expansion of Italy in foreign lands has solicited the aid of all Italian consuls and consular agents in preparing a census of the Italian physicians in foreign lands, and obtaining information concerning each physician. The institute proposes to make better known the merits of Italian physicians living abroad, and to inform them of the progress Italy has made in industrial sanitation, with the hope that some of the newer ideas will be introduced in foreign lands. The institute, with headquarters in Milan (Via Silvio Pellico 6), requests those who have definite information in regard to Italian colleagues residing in foreign countries, or the physicians themselves, to furnish data concerning them. The institute desires also information with reference to Italian hospitals, welfare centers and the like located in any country of the world.

The Crusade Against Cancer

Minister of the Interior Federzoni has addressed to the prefects of the realm a circular letter in which he states that the crusade against malignant tumors should have three distinct objects: the scientific, the therapeutic and the hygienic; the scientific purpose being to discover the pathogenesis of the disease, the therapeutic object to study new curative measures and to perfect those already existing, and the hygienic outlook to provide for the prevention of this class of diseases. With these objects in view, there will be established in the chief city of each province a cancer center for diagnostic research, which will be supplied with ample clinical and laboratory facilities. These centers, to be located preferably in scientific, hospital or clinical institutes, will pursue the following aims: (1) the early diagnosis of cancer; (2) aid to cancer patients, including removal, when possible, to suitable therapeutic institutions; (3) inquiries into the individual lives of patients, their occupations, their family history and their home environment; (4) the collection of study material for the better recognition of the disease and its causes, and (5) the launching of an active campaign against cancer among the general public. The work of the centers of diagnostic research should be supplemented by special committees that would seek to coordinate the various activities and movements.

The Antituberculosis Sanatorium in Sicily

In honor of the twenty-fifth anniversary of the coronation of Victor Emmanuel III, an Italian diplomat has contributed a considerable sum to be used for charitable purposes in southern Italy and the adjoining islands. A portion of the donation has been allotted to the Istituto d'igiene, previdenza ed assistenza sociale, founded and directed by Prof. Ettore Levi, to serve as an initial contribution toward the construction of an interprovincial tuberculosis sanatorium to be erected in the commune of Caltagirone (Sicily). The sanatorium will bear the name of the king.

Award of the Lallemand Prize

The French Academy of Sciences has awarded the Lallemand prize to Dr. Piera Locatelli, assistant in the institute of general pathology and histology at the University of Pavia, for researches on the influence of the nervous system on regeneration processes.

The Death of Celso Pellizzari

Prof. Celso Pellizzari, director of the Clinica dermosifilopatica and of the Istituto fototerapico at the University of Florence, died, December 25, from pneumonia, at the age of 74. He was a descendant of two famous clinicians of the Florentine school of medicine, Profs. George Pellizzari and Peter Pellizzari. Almost immediately after his graduation, he devoted himself to dermatology and syphilology, becoming associated, about forty years ago, with the dermatologic clinic at the University of Siena. A few years later, he won, through a competitive examination, the important chair at the University of Pisa, which he held until 1892. There he founded the school of dermatology and syphilology. From Pisa he removed to Florence, where he was engaged principally in scientific work and the work of organization. He succeeded in providing for his clinic a laboratory supplied with modern equipment for research work. He also transformed the old infirmaries into clean and well ventilated institutions, and established a dispensary for dermatologic patients that is in keeping with modern ideas. But his chief service to humanity was the creation in Florence of a radiotherapeutic institute. In founding the institute he contributed generously of his own funds. Among his fifty or more scientific publications, of special importance are: his researches on the modifications in the bones in hereditary syphilis, on cerebral syphilis, on serotherapy and attenuation experiments in syphilis, together with numerous articles on interesting cases and questions of practical interest. In the field of venereal disease, he was among the first to appreciate the importance of public prophylaxis. Professor Pellizzari was the recipient of numerous orders of knighthood; he was corresponding member of the Royal Society of Medicine of London; of the Italian, French and Danish societies of dermatology and syphilology; of the Società italiana di radiologia; of the Royal Academy of Medicine of Rome; of the Accademia medicofisica of Florence; of the R. Accademia dei Georgofili; of the Società per gli studi contro il cancro, and of various other scientific associations.

BERLIN

(From Our Regular Correspondent)

Jan. 16, 1926.

Health Conditions in Prussia

In Prussia, in recent years, the housing situation has grown worse. In the town of Jülich (population 8,800), 542 families were unable to find dwellings. In Hirschberg, 70 per cent of the population had only one room. In Stade, 159 tuberculous persons were sleeping in the same rooms with healthy members of the family; sixty-eight tuberculous persons were sleeping in the same beds with healthy persons. In Schweidnitz, of 268 young children, thirty-seven were living with five and more persons in single rooms. In the fourteen towns of the government district Marienwerder, 15 per cent of the school children were sleeping three in a bed; in the township of Wiedenburg, 16 per cent. In Wilhelmsburg, 500 families had not space enough to put up the beds they needed. In a village in Wittmund township, the parents and twelve children of one family were living in an unfinished barn, one corner of which was reserved as a sleeping room for the parents and the younger children, while the remaining children slept in the outbuildings.

The status of children who were born the last year of the war and during the hard years immediately following it was the worst of any of the age groups of the population, while the condition of the infants was, in general, satisfactory. The infant mortality was the lowest ever recorded in Prussia, and in some districts the rates were as low as hitherto has been known only in Scandinavian countries. Nevertheless, in some districts as high as 29.7 per cent of the young children examined were suffering from rickets, some so severely that they did not learn to walk until they were 3 years old. The nutrition and general health of school children have improved perceptibly, though prewar conditions have not yet been reached. Girls showed more improvement than boys. In the cities of the commune of Schleswig the percentage of school children who were undernourished has been reduced from 20 to 12.5; in rural places the corresponding figures were 10 and 7.5 per cent. In Paderborn, 122 of 137 school entrants were suffering from rickets, scrofula or anemia. Almost half of the school graduates in Wandsbek were undernourished and looked like 11 or 12-year-olds. In Königsberg, of the school graduates, 17 per cent of the boys and 19 per cent of the girls were unfit for any regular occupation; the same was true of 15 per cent of the school graduates in Cologne. Among the causes of these conditions are child labor, lack of food (although school lunches and vacations in the country have worked wonders), lack of clothing, lack of beds, bad housing conditions, and neglect. Although the tuberculosis mortality was the lowest ever recorded in Prussia (11.8 deaths per 10,000 population), a tremendous number are still infected. From twenty-eight government districts the following figures were reported: Of school children, the number per thousand infected in various years was: in 1913, 8.3; 1919, 17.2; 1923, 32.7; 1924, 25.9. The corresponding figures for adults were: in 1913, 5.5; 1920, 7.2; 1924, 9.2.

Food costs so much that the allowance for clothing is small. In Glatz 14.5 per cent of the pupils; in Neisse 5 per cent, and in Soltau 9 per cent gave lack of clothing as the reason for absences from school. In Sagan (Lower Silesia) 10 per cent did not have shirts. In Wülfrath, of thirty-eight school children, three had only one shirt; in Glatz, of 5,874 pupils, 366 had but one shirt.

Among juveniles, a slight improvement in health was noted, due, in part, to the young men's clubs, and, in part, to the increased interest in sport and physical exercise.

A sign of the bad economic situation is the decrease in the number of marriages and the increase of suicide. In 1921 there were twelve marriages per thousand population; in 1924 only seven couples were married. Furthermore, the number of miscarriages is increasing, owing, in part, to the fact that more women are doing heavy work.

The Spleen and the Pathogenesis of Anemia

Before the Leipziger medizinische Gesellschaft, Professor Hueck, pathologist, recently gave an address on the part played by the spleen in anemia. Pathologic changes observed in the spleen in anemia are so varied that there are no typical findings. Specific changes for pernicious anemia have not been discovered; the vascular changes described by Eppinger are by no means characteristic. Nor is the relation between function and structure as yet clearly demonstrated. The idea of a splenic tumor arising from waste products was discussed. The spleen is a depository for waste products from the blood, but its iron content, in pernicious anemia especially, is often strikingly small. (Hueck observed in typical pernicious anemia degrees of iron content from very slight to very marked.) In adults anemia may be the cause of erythrocyte-forming foci developing in the spleen; but in pernicious anemia they are often wanting. Some have come to regard the spleen as an active hemolytic organ. The spleen is a specific organ and not merely a part of the reticuloendothelial apparatus. Morphologic evidence of an active hemolytic rôle of the spleen in pernicious anemia has not been adduced. Phagocytosis of red blood corpuscles occurs only to a limited extent and by no means regularly. In connection with the new physiologic experiments of Bancroft, Hueck discussed the rôle of the spleen as a depository and regulator of the blood volume. The circulation of the spleen must be designated, in general, as "open"; that is, spleen reticulum is interposed between the end of the arterial and the beginning of the venous circulations. The reticulum is a system of contiguous blood spaces, which, according to their distention, have the appearance of being closed or open. In the collapsed condition of the spleen, the blood flows from the arterial capillaries almost directly into the venous sinuses. As to the structure of the venous sinuses, Hueck thinks that in the collapsed spleen the venous sinuses present a membrane-like wall. The more the spleen becomes distended, the more the wall of the venous sinuses takes on the appearance of a lattice-work, through which occasionally cells may protrude. The fact that the spleen may be a blood depository must not be underestimated, since in the cat from 10 to 20 per cent of the total blood volume, and in the dog fully 20 per cent, can be stored by the spleen. With reference to that function, two distinct parts must be distinguished: (1) the venous sinuses, which can store a large quantity of blood, but in which blood corpuscles are not necessarily destroyed, and (2) the blood spaces in which blood corpuscles are destroyed. The opening and closing of the latter is controlled not only by mechanical factors but also by the nature of the blood, nervous influences, and the like. Whether that portion has an active hemolytic rôle cannot be stated as yet with certainty. Our knowledge must be extended through irrigation methods (also by experiments on man), material for which is difficult to procure.

Marriages

CONRAD RAY NYSTRUM, Medford, Wis., to Miss Irma Mechelke of Birnamwood, at Waukegan, Dec. 19, 1925.

GERALD A. EZEKIEL, Richmond, Va., to Miss Julia-May Sommers of Washington, D. C., February 22.

WILMER C. EDWARDS, Richland Center, Wis., to Miss Lucile B. Postel of Muscoda, February 19.

WILKIE B. RICE to Miss Georgianna Barnes, both of Fort Wayne, Ind., January 5.

EMIL N. BIZUB to Miss Ann K. Biczak, both of Passaic, N. J., January 12.

Deaths

Charles Alexander Pfender ✱ Washington, D. C.; George Washington University Medical School, Washington, 1905; professor of roentgenology and electrotherapeutics, Georgetown University School of Medicine, Washington; member of the Washington Society for Nervous and Mental Diseases, the American Roentgen Ray Society and the Radiological Society of North America; on the staffs of the Sibley and Tuberculosis hospitals; aged 48; died, February 17, in Boston, following an operation.

Ira Albert Leighton, Boulder, Mont.; University of Michigan Homeopathic Medical School, Ann Arbor, 1885; state senator; for about thirty years on the staff of the Montana School for the Deaf and Blind and Training School for Backward Children; county physician for several years; aged 67; died, February 2, at the Murray Hospital, Butte, of carcinoma.

James Frederic Alexander, Jasper, Ala.; Vanderbilt University Medical Department, Nashville, 1893; member of the Medical Association of the State of Alabama; secretary of the Walker County Medical Society; on the staff of the Walker County Hospital; aged 54; died, February 6, of pneumonia.

Charles Clancy Grandy ✱ Fort Wayne, Ind.; Rush Medical College, Chicago, 1911; member of the American Roentgen Ray Society and the Radiological Society of North America; on the staffs of Indiana School for Feebleminded Youths and the Lutheran Hospital; aged 40; died, February 12, of chronic nephritis.

William Topping Watson ✱ Baltimore; University of Maryland School of Medicine, Baltimore, 1891; formerly professor of therapeutics, at his alma mater; member of the American College of Physicians; aged 63; died, February 6, at the Church Home and Infirmary, of septicemia.

Henry Ellis Sanderson ✱ Stockton, Calif.; Cooper Medical College, San Francisco, 1885; formerly on the faculty of his alma mater; for more than thirty years on the staff of the Stockton State Hospital; aged 67; died, February 8, at St. Joseph's Hospital, of pneumonia.

John Everitt Pickard ✱ Reno, Nev.; Victoria University Medical Department, Toronto, Ont., Canada, 1885; formerly county physician; aged 69; died, January 27, at the Morton Hospital, San Francisco, of pulmonary infarct following fractures of ribs.

James Third, Kingston, Ont., Canada; Trinity Medical College, Toronto, 1891; formerly emeritus professor of medicine, Queen's University Faculty of Medicine; for five years superintendent of the Kingston General Hospital; aged 60; died, Dec. 17, 1925.

Edward Loftus Hope Barry, Jerseyville, Ill.; Rush Medical College, Chicago, 1860; Civil War veteran; formerly mayor of Jerseyville, county coroner, county physician and member of the board of education; aged 88; died, February 4, of bronchitis.

Henry Warren Rogers ✱ Cleveland; University of Buffalo (N. Y.) Department of Medicine, 1880; formerly emeritus professor of medical diagnosis and clinical medicine, Cleveland College of Physicians and Surgeons; aged 67; died, February 1.

Barton Greene Dupre, Los Angeles; Western Reserve University School of Medicine, Cleveland, 1916; member of the

✱ Indicates "Fellow" of the American Medical Association.

California Medical Association; formerly a practitioner in Indiana and Ohio; aged 35; died, January 31, following an operation.

Harry Hillard Weer, Indianapolis; Eclectic Medical Institute, Cincinnati, 1884; Central College of Physicians and Surgeons, Indianapolis, 1904; member of the Indiana State Medical Association; aged 64; died, February 4, of heart disease.

Hiram Sturgeon Rogers, Red Oak, Iowa; College of Physicians and Surgeons, Keokuk, 1876; University of Illinois College of Medicine, Chicago, 1886; Confederate veteran; aged 81; died, January 31, at a local hospital, of senility.

Henry Archbold Fischer, Jamaica, N. Y.; Columbia University College of Physicians and Surgeons, New York, 1906; member of the Medical Society of the State of New York; aged 41; died in January, of bronchopneumonia.

Frederick A. Stine ✠ Newport, Ky.; Cincinnati College of Medicine and Surgery, 1901; member of the House of Delegates of the American Medical Association, 1924 and 1925 sessions; aged 58; died, February 6, of pneumonia.

Horace Ray Chapman, Bennett, Iowa; State University of Iowa College of Medicine, Iowa City, 1901; member of the Iowa State Medical Society; formerly state senator; aged 52; died, February 1, of heart disease.

Isaac Lincoln Roberts, Boston; Leonard Medical College, Raleigh, N. C., 1894; on the staff of the Massachusetts General Hospital, where he died, January 21, of arteriosclerosis and cerebral hemorrhage, aged 55.

Frederick Clifford Gay, Brooklyn; Medical Department of the University of the City of New York, 1891; member of the Medical Society of the State of New York; aged 61; died, February 4, of heart disease.

Thomas J. Harrison, Montgomery, La.; Medical Department University of Louisiana, New Orleans, 1879; member of the Louisiana State Medical Society; died, January 28, of cerebral hemorrhage.

Nathaniel Vaughn Shannon ✠ Cambridge, Mass.; University of Pennsylvania School of Medicine, Philadelphia, 1894; on the staff of the Cambridge Hospital, where he died, February 2, aged 62.

Henry Edward Brown, Utica, N. Y.; Medical Department of the University of the City of New York, 1888; member of the Medical Society of the State of New York; aged 59; died, February 3.

Harvey Ashbury Fawsett, Rome, N. Y.; University of Maryland School of Medicine, Baltimore, 1891; aged 57; died, January 28, at a hospital in Washington, D. C., following an operation.

Henry Ehrlich ✠ Boston; Medical School of Harvard University, Boston, 1886; formerly on the staff of St. Mary's Infant Asylum and Lying-In Hospital; aged 60; died, February 5.

Robert S. Shipley, San Francisco; University of Wooster Medical Department, Cleveland, 1877; formerly a practitioner in Ohio; aged 73; died, February 4, of chronic nephritis.

Seth Burnham Foster, Eureka, Calif.; Medical Department of Columbia College, New York, 1869; for thirteen years county physician; aged 85; died, January 6, of senility.

Grace Darling Peele ✠ Brooklyn; University of Michigan Medical School, Ann Arbor, 1907; aged 47; died, February 4, at the Long Island College Hospital, of endocarditis.

Joseph Hegeman Bogart ✠ Rosyln, N. Y.; Bellevue Hospital Medical College, New York, 1872; formerly bank president; aged 79; died, February 3, following a long illness.

Cyrus Blazer McClurg ✠ Independence, Kan.; Washington University Medical School, St. Louis, 1912; served during the World War; aged 40; died in January.

William Efner Wheelock ✠ New York; Medical Department of Columbia College, New York, 1876; aged 73; died, February 3, at the Presbyterian Hospital.

Walter Edward Cladek ✠ Rahway, N. J.; Medical Department of the University of the City of New York, 1877; aged 69; died, February 6, of pneumonia.

Theodore N. Rafferty, Robinson, Ill.; Medical College of Ohio, Cincinnati, 1869; member of the Illinois State Medical Society; aged 80; died, February 6.

William E. P. Tims, Ennis, Texas; Vanderbilt University Medical Department, Nashville, 1889; aged 62; died, February 4, of cerebral hemorrhage.

Jesse Allen Van Fossen, Columbus, Ohio; Medical College of Ohio, Cincinnati, 1893; aged 59; died, January 23, at the Grant Hospital, of pneumonia.

Henry B. Rockwell, Little Rock, Ark.; University of Pennsylvania School of Medicine, Philadelphia, 1881; aged 70; died, February 1.

John W. Groesbeck, Harvard, Ill.; Rush Medical College, Chicago, 1866; Civil War veteran; also a druggist; aged 87; died, February 8.

Orrin William Nash Austin, Topeka, Kan.; Ensworth Medical College, St. Joseph, 1908; aged 42; died, February 1, at St. Joseph, Mo.

William Henry Hudson Moore ✠ Lafayette, Ind.; Rush Medical College, Chicago, 1906; aged 45; died, February 6, of pneumonia.

John Henry Alston, Sumnerville, S. C.; Leonard Medical School, 1893; aged 56; died, January 27, of cerebral hemorrhage.

Ida V. Stambach, Ojai, Calif.; Hahnemann Medical College of the Pacific, San Francisco, 1888; aged 72; died, February 8.

Nathan Rosewater ✠ Cleveland; Cleveland College of Physicians and Surgeons, 1897; aged 70; died, February 9, of pneumonia.

Louis Weber, Los Angeles; Medical Department of the University of the City of New York, 1880; aged 65; died, January 28.

Flora A. Brown Casseday, Portland, Ore.; Hahnemann Medical College and Hospital, Chicago, 1898; aged 72; died, February 3.

Thomas Edwin Reeves, Camp Hugh, Ala.; University of the South Medical Department, Sewanee, 1906; aged 49; died, January 19.

George W. Swimley, Bunker Hill, W. Va.; Medical College of Ohio, Cincinnati, 1876; aged 88; died, February 1, of senility.

John Bunion Chastain, Blue Ridge, Ga.; Atlanta Medical College, 1895; formerly state senator; aged 68; died in January.

William Henry Weaver ✠ New Orleans; University of Illinois College of Medicine, Chicago, 1883; aged 68; died, February 1.

Carroll E. Miller ✠ Cadillac, Mich.; Rush Medical College, Chicago, 1879; aged 75; died, January 27, following a long illness.

Albert N. Hamilton, Waynetown, Ind.; Miami Medical College, Cincinnati, 1871; aged 78; died, January 23, of diabetes.

Franklin T. Johnson, Cottonwood Falls, Kan. (licensed, Kansas, 1901); Civil War veteran; aged 85; died, February 5.

Seth Mills, Valley Mills, Ind.; University of Michigan Medical School, Ann Arbor, 1869; aged 85; died, January 10.

Edward D. Snyder, Arcanum, Ohio; Medical College of Ohio, Cincinnati, 1872; aged 88; died, February 3, of senility.

Charles Edgar Smith, Los Angeles; Cleveland University of Medicine and Surgery, 1874; aged 76; died, Dec. 5, 1925.

Fred Thompson, Orleans, Mass.; Medical School of Harvard University, Boston, 1888; aged 61; died, January 7.

Joseph C. Alexander, Indianapolis; Medical College of Indiana, Indianapolis, 1895; aged 66; died, Dec. 3, 1925.

Norman E. Bachman, Portland, Ore.; Medical College of Indiana, Indianapolis, 1877; aged 81; died, January 30.

Kent Kane Straughan, Waveland, Ind.; Indiana Medical College, Indianapolis, 1878; aged 68; died, January 17.

Albert O. Lockhart, Lumpkin, Ga.; Meharry Medical College, Nashville, Tenn., 1891; aged 57; died, January 29.

Arthur C. Evelin, Aurelius, Mich.; Baltimore University School of Medicine, 1898; aged 51; died, January 31.

William Henry Hodges, Kansas City, Mo.; Kansas City Medical College, 1889; aged 61; died in February.

Louis E. Berner, Indianapolis; Medical College of Indiana, Indianapolis, 1901; died, January 25, of paralysis.

Karl F. Tipton, Erie, Pa.; Medico-Chirurgical College of Philadelphia, 1899; aged 47; died, Dec. 12, 1925.

Henry Hildreth, Delano, Calif.; St. Louis Medical College, 1874; aged 76; died, February 4.

CORRECTION

Virginia Helm Richardson Milner.—The death of Dr. Milner, noted in THE JOURNAL, February 13, was due to streptococcic meningitis which followed an infection of her hand received while operating; Dr. Milner was resident physician at the Children's Hospital, San Francisco.

The Propaganda for Reform

IN THIS DEPARTMENT APPEAR REPORTS OF THE JOURNAL'S BUREAU OF INVESTIGATION, OF THE COUNCIL ON PHARMACY AND CHEMISTRY AND OF THE ASSOCIATION LABORATORY, TOGETHER WITH OTHER GENERAL MATERIAL OF AN INFORMATIVE NATURE

KIRKPATRICK'S PUL-BRO-TU

Another Quack Consumption Cure

In Portland, Oregon, one George Kirkpatrick, who places the mystic letters "M.D.C." after his name, exploits a remedy for tuberculosis under the name of "Pul-Bro-Tu." It appears that Kirkpatrick has made so much money in the sale of his nostrum for consumption that he has been tempted to take a flyer in other fields, selling "Rheugoit" for such widely differing conditions as "stomach complaint," "rheumatism" and goiter.

Kirkpatrick's name appears in the Portland telephone directory with the prefix "Dr." before it, although the man, of course, is not a physician. It is said that he had been a veterinarian previous to going into the consumption cure business. The State Board of Medical Examiners of Oregon reports that it has had the man arrested at various times for violation of the Medical Practice Act, and on one occasion secured a conviction. He was fined a trivial $25, which he paid and thanked the prosecuting officials for the cheap publicity he had obtained!

A Portland physician whose practice is devoted to the treatment of tuberculosis is said to have seen several victims who have taken Pul-Bro-Tu, having been called when they were having a hemorrhage.

As is common with the quacks that go into the consumption cure field, Kirkpatrick in the directions that go with his nostrum recommends at least some of the universally accepted routine hygienic and dietetic treatment for cases of consumption. This, of course, is an old dodge. It is done for the purpose of making a showing in court. It interferes not at all with the sale of the nostrum, first, because the victim does not get the directions until he has made the purchase, and second, because it is the universal experience of those who have investigated consumption cure fakes that the tuberculous who depend on nostrums pay no attention to the recommendations which are merely incidental to the taking of the drug. A consumptive who is convinced that by taking something out of a bottle he may be cured of his disease is not going to subject himself to the somewhat rigid requirements of rational treatment for this condition.

In order that the public might be given some information regarding this particular nostrum, Pul-Bro-Tu was analyzed in the A. M. A. Chemical Laboratory. The report follows:

LABORATORY REPORT

"Three original bottles of Pul-Bro-Tu ("Geo. Kirkpatrick, M.D.C., Portland, Oregon") were submitted to the A. M. A. Chemical Laboratory for examination. No statement of composition was given. Each bottle contained approximately 155 cc. (about 5 fluidounces) of a brown liquid with a small amount of sediment. The specific gravity of the solution at 15 C. was 1.0088. Qualitative tests indicated the presence of potassium, iodid, an arsenic compound and caramel. Heavy metals (other than arsenic), alkaloids, emodin-bearing (laxative) drugs, salicylates or coal tar derivates were not found. Quantitative determinations gave:

"Total solids (at 120 C.)	1.5	per cent
"Potassium (K^+)	0.25	per cent
"Iodid (I^-)	0.82	per cent
"Arsenic (as arsenous oxide)	0.0026	per cent

"From the foregoing analysis, it may be concluded that Pul-Bro-Tu consists essentially of a weak solution of potassium iodid and an arsenic compound—probably solution of potassium arsenite—colored with caramel. The dosage according to the label is '½ teaspoonful in a glass of milk, once a day'; this is equivalent to 0.014 Gm. (⅕ grain) of potassium iodid and 0.000035 Gm. (1/2000 grain) of arsenous oxide (or about 1/50 minim of solution of potassium arsenite —Fowler's Solution)."

From the chemists' report it will be seen that Pul-Bro-Tu is for all practical purposes merely a weak solution of potassium iodid and Fowler's solution. Summed up, it may be said that Pul-Bro-Tu has not the slightest value as a cure for tuberculosis. On the contrary, the product itself may easily do harm, while the consumptive who relies on it is virtually committing suicide.

Correspondence

PSYCHANALYTIC CLINICS

To the Editor:—In the *Archives of Neurology and Psychiatry* (**15**:139 [Jan.] 1926) appears a discussion on the subject of psychanalysis before the New York Neurological Society. The proposition was put forward by one speaker that there was now need of free clinics for psychanalysis, and he advocated that these be established as rapidly as possible. This proposition was approved by several other speakers.

The suggestion that psychanalytic clinics be established, emanating from one of our leading neurologic societies, calls for a protest by those who regard psychanalysis as having failed to establish itself as a scientific method and as having in it great potential elements of danger and little of good. This is not the time or place for a dissertation on the subject; but it ought to be generally known that the vast majority of men who are engaged in the specialty of nervous and mental disease reject and disapprove of freudianism. Many of the leaders of our specialty (including Sachs, Collins, Dana, Dercum, Burr and Mills), after painstaking investigation of the subject, have thoroughly repudiated freudianism as unscientific, as based largely on unproved assumption, and as being on the whole harmful in practice.

It is well known that in the American Neurological Association there are only a few members who approve of freudian theories and attempt to put them into practice. Freudian propagandists, like other propagandists, go ahead as though there were no opposition or that it did not count, as evidenced by this amazing proposition presented to the New York Neurological Society. THEODORE DILLER, M.D., Pittsburgh.

"FOOD" AND "NUTRITION"

To the Editor:—I have read with much interest an editorial in THE JOURNAL, February 6, entitled "A Nutritional Outlook." The movement of the editorial is clear until one reaches the last three sentences, in which the writer falls into a common error in confusing the terms "food" and "nutrition." No doubt there has been great improvement during recent years in the quality of food available, in the methods of its preparation and in the food intelligence of consumers. These facts, however, need not necessarily justify the statement made concerning possible "departures from the essentials of good nutrition." Gould's Medical Dictionary, for instance, defines "nutrition" as "the processes involved in the absorption and assimilation of those substances forming living tissue or supporting the processes of life." The French and earlier forms of the word indicate the same emphasis—concern primarily with the processes involved and not merely with the most obvious material—food.

Clinical studies continuing through many years have shown clearly that the problem of food is not the chief cause of physical unfitness or malnutrition. Even food habits prove to be a more serious matter than does food itself, as the improvement noted in the latter factor has not led to a corresponding improvement in those habits which are not subject to the benefits of objective standardization brought

about in such necessities as bread, cereals and milk. Outside this particular field of food habits and food lie many factors involving health habits and conditions which, to mention only a few, are connected with nasopharyngeal disorders, fatigue and other occasions for toxic conditions seriously affecting "absorption and assimilation."

WILLIAM R. P. EMERSON, M.D., Boston.

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS and queries on postal cards will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

REMOVING SUPERFLUOUS HAIR

To the Editor:—I should like to get some information about the removal of excess hair on the face and neck. I have been told that this can be accomplished by electricity, but have been unable to find adequate instruction. One electrotherapeutic firm sold me some fine needles and told me that a small vibrator coil would furnish the necessary current to destroy the root of the hair. The coil I have has a primary and secondary with a movable soft iron plunger. I was instructed to connect the fine needle to the "negative" terminal of the secondary coil and insert it along the hair shaft to the root, after which I should turn on the current from a dry cell and regulate the buzzer interrupter to its highest frequency. The patient was to hold the "positive" terminal in the hand. I tried this on a willing patient and also on myself, but the result was not satisfactory. I was told that the hair root would immediately bubble and show a white mark on the skin. Instead, however, I got a most painful sensation and the hair root was not affected. Can you tell me whether the instrument is adequate? It is a small primary and secondary coil with a buzzer interrupter and a soft iron coil in the center, which is used to regulate the amount of secondary current. It is designed to run on one dry cell; but, of course, more can be added if necessary. Is the current from one cell (1½ volts) too small? Should there be any great amount of pain when the current is being run through its completed circuit? Is there any appreciable danger to the patient? Will you please give me some enlightenment or refer me to a book on this question?

WILLIS S. KNIGHTON, M.D., New York.

ANSWER.—The instrument described is not satisfactory for electrolysis, as it is essential that the instrument contain a milliammeter, so that the operator can properly control the amount of current. Some pain is always experienced in the process of electrolysis, but, as a rule, this is not great. If the reaction is such as described, the current used probably is too large; but there would be no danger to the patient beyond the production of scars, which frequently occur when too large a current is used, or when the needle is left in the follicle too long. "Electro-Therapy Ionic Medication," by Harold H. V. Cross (Philadelphia, J. B. Lippincott Company) gives full details regarding electrolysis.

REMOVAL OF IRON RUST FROM WATER

To the Editor:—What chemicals are used to rid water of iron rust from pipes; also where the water contains soluble salts of iron which become precipitated by boiling? Are any of the preparations on the market with trade names used for this purpose injurious? I have a family subject to intestinal disturbances which makes me suspect that the cause is one of these so-called water softeners. Please use only initials.

F. M., Pennsylvania.

ANSWER.—Iron may be present in water to the extent of about 0.3 part of iron per million of water without causing a nuisance to consumers. In certain industries, as the manufacture of white paper, even this small amount may cause trouble. Methods of removal will depend somewhat on the presence of other impurities, such as organic matter, manganese and carbon dioxide. If the content of organic matter is low, aeration of the water, followed by sedimentation or contact with some material such as coke or crushed stone, is generally, but not always, successful. Iron is present in natural waters in the lower state of oxidation, and it is necessary to oxidize it in order to obtain nearly complete precipitation. The oxygen in the air may do this. In some cases it has been found necessary to add other oxidizing agents, as permanganate or chlorine. The ordinary sand filter will sometimes remove iron.

When organic matter is present, an oxidizing agent or a coagulant has been found necessary to remove iron. Lime and alum are used for this purpose. Lime may also be used to assist iron removal by aeration.

Water softeners generally remove iron. The lime-soda process is probably most frequently used, although zeolites have recently become popular. Numerous other chemicals are used for softening, but we are unaware that any are harmful.

There is also probability that the iron is not in the original water, but is acquired out of the system in which the water circulates. Most natural water carries enough dissolved gas to start corrosive action, especially in warm places. If practical, the removal of the gas rather than the removal of the iron is often the preferred procedure.

CARBONIC ACID NAUHEIM BATHS

To the Editor:—Please inform me what other climatic stations, having carbonic acid nauheim baths, besides Mount Clemens, Mich. (Hot Springs, Ark.?) there are in the United States.

L. Z., Chicago.

ANSWER.—There are two places in the eastern United States where special facilities for giving carbonic acid ("Nauheim") baths may be found. They are Glen Springs, Watkins, N. Y., and Saratoga Springs, N. Y. At Glen Springs a technic has been developed during the last thirty years consisting of the use of saline carbonated baths and the valuable Stokes-Oertel hill climbing exercises for strengthening heart muscles. The waters are a strong saline having large quantities of sodium, calcium, magnesium and ammonium chlorides. They are heated to the required point and charged with carbon dioxide. The brine is diluted for baths, as the water is six times as strong as Sprudel XVI at Nauheim, Germany.

Saratoga Springs waters are likewise naturally cold and heavily charged with salines, but have natural carbon dioxide sufficient for the baths. They are heated for use.

The baths at Saratoga are administered under the control of the New York State Reservation.

In California there are resorts having thermal waters with a tolerably high carbonic acid gas content and salines. They approximate the Nauheim springs in that respect to only a very limited extent as, for example, Byron Hot Springs; but recent data as to facilities for treatment of heart disease are not at hand.

FURUNCLES FROM WRESTLING MATS

To the Editor:—A number of our athletes who wrestle have trouble with furuncles, apparently from the mats used. Please publish a simple method of efficient sterilization or disinfection for mats. Also recommend any local application that might be used on the skin of the athletes.

L. A. MITCHELL, M.D., Stillwater, Okla.

ANSWER.—Wrestlers, like football players and oarsmen, suffer at times from furuncles. Some cases have been reported in which infection was apparently transmitted from one wrestler to another, although it could not be determined whether this was direct or by means of the mats. It is a good plan to use mat covers of canton flannel or some similar material which can be removed, washed and sterilized each week. In addition to this the mat covers and mats may be sprayed with solution of formaldehyde from time to time. The wrestlers' suits should also be washed thoroughly each week. Apparently there is no application to the skin that is an effective preventive, but the men should be particularly careful to bathe thoroughly with soap.

TREATMENT OF SYPHILIS

To the Editor:—We have in the hospital a patient with acquired syphilis of one year's duration previous to beginning treatments, and he has a 4 plus Wassermann reaction in spite of the treatments taken. The first course consisted of mercuric cyanide in the buttock, to the extent of tolerance, followed by a preparation of neo-arsphenamine, manufactured by Powers-Weightman-Rosengarten Company, with the trade name novarsenobenzol-Billon. Two months later a blood test revealed a 4 plus Wassermann reaction. We then treated him with alternate doses of mercurosal and neo-arsphenamine. Three months later he still had a 4 plus Wassermann reaction. The last course consisted of alternate doses of mercuric cyanide and neo-arsphenamine, together with a bismuth compound.

CHARLES E. KNOWLES, M.D., Midwest, Wyo.

ANSWER.—Syphilis of a year's standing before treatment is begun is not seldom difficult to bring under control, and it is not at all surprising that the case under discussion should fail to become seronegative after three courses of treatment. Details of the number and frequency of injections are not given by our correspondent. It is understood that they were suited to the constitution of the patient. The intervals between courses were somewhat too long. A month should be sufficient. Further treatment with sulpharsphenamine and a bismuth preparation is suggested. After the serum reaction has become negative, another regular course should be given, and the interval between courses cautiously lengthened.

Medical Education, Registration and Hospital Service

COMING EXAMINATIONS

CALIFORNIA: Los Angeles, March 8-11. Sec., Dr. Charles B. Pinkham, Room 906, Forum Bldg., Sacramento.

COLORADO: Denver, April 6. Sec., Dr. David A. Strickler, 612 Empire Bldg., Denver.

CONNECTICUT: Hartford, March 9-10. Sec., Dr. Robert L. Rowley, 79 Elm St., Hartford. Homeo. Board, New Haven, March 9. Sec., Dr. Edwin C. M. Hall, 82 Grand Ave., New Haven.

IDAHO: Boise, April 6. Commissioner of Law Enforcement, F. A. Jeter, Boise.

ILLINOIS: Chicago, April 6-8. Supt. Regis., Mr. V. C. Michels, Springfield.

MAINE: Portland, March 9-10. Sec., Dr. Adam P. Leighton, Jr., 192 State St., Portland.

MASSACHUSETTS: Boston, March 9-11. Sec., Dr. Frank M. Vaughan, 144 State House, Boston.

MINNESOTA: Minneapolis, April 6-8. Sec., Dr. Thomas McDavitt, 734 Lowry Bldg., St. Paul.

MISSOURI: Jefferson City, March 9-11. Chief, Licensure, Dr. Ross Hopkins, Capitol Bldg., Jefferson City, Mo.

MONTANA: Helena, April 6-8. Sec., Dr. S. A. Cooney, Helena.

NEW HAMPSHIRE: Concord, March 11-12. Sec., Dr. Charles Duncan, Concord.

NEW MEXICO: Santa Fe, April 12-13. Sec., Dr. W. T. Joyner, Roswell.

OKLAHOMA: Oklahoma City, March 9-10. Sec., Dr. J. M. Byrum, Shawnee.

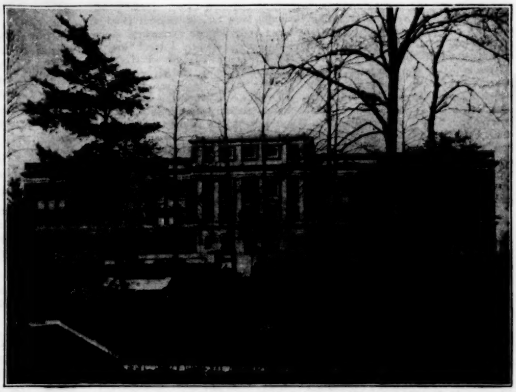
TEXAS: Dallas, American Board of Otolaryngology, April 19. Sec., Dr. W. H. Loeb, 1402 South Grand Blvd., St. Louis, Mo.

THE NEW BUILDING OF THE ARMY MEDICAL SCHOOL

Although the Army Medical School was founded in 1893 by Surgeon General Sternberg, only recently has it moved into a home of its own. The present building of the Army Medical School was finished in 1923 at a cost of about $500,000. It is a unit of the new Army Medical Center, which is composed of the Walter Reed Hospital and other service schools, and eventually will include the Army Medical Library and Museum.

The building is of brick and limestone and is to consist of a central section about 50 feet long and 50 feet deep, and two wings about 100 feet long. The wings have a basement and three stories, while the central part of the building has four stories. So far, only the south wing has been built. Each floor has a central hall running nearly the length of the building. The first floor is occupied with administrative offices, library, and roentgen-ray section for instruction and practical work. The second floor has a lecture room and vaccine section, and a number of individual laboratories, including those of dental bacteriology and veterinary medicine. The vaccine section is an important part of the institution, as it produces and issues all the typhoid vaccine for the Army and Navy. The third floor has large bacteriologic and chemical laboratories capable of taking care of seventy-two men. The fourth floor is devoted to animals and photomicrography. The basement contains refrigerating and ventilating plants, lockers, printing and mimeograph rooms, shops, electrical controls, storerooms and the shipping department.

Courses of instruction are given for medical officers in basic and advanced work, and to enlisted men as technicians in roentgen-ray and laboratory work. The classes include veterinary and dental as well as medical officers.



New building of Army Medical School.

Connecticut November Examination

Dr. Robert L. Rowley, secretary of the Connecticut Medical Examining Board, reports the written examination held at Hartford, Nov. 10-11, 1925. The examination covered 7 subjects and included 70 questions. An average of 75 per cent was required to pass. Of the 27 candidates examined, 18 passed and 8 failed. Twenty candidates, including 1 undergraduate, were licensed by endorsement of their credentials. The following colleges were represented:

PASSED College	Year Grad.	Per Cent
Yale University School of Medicine	(1924) 75, (1925)	76.6, 82.4
University of Maryland School of Medicine	(1925)	83.6
Boston University School of Medicine	(1925) 75,	79.8
Harvard University	(1924) 84.7, 90.4, (1925)	84.1
Tufts College Medical School	(1925) 78.9,	83.2
Columbia University College of Phys. and Surgs.	(1925)	89.1
Cornell University Medical College	(1923)	84.7
Long Island College Hospital	(1925) 77.5,	80
Queens University Faculty of Medicine	(1924)	83.4
University of Toronto Faculty of Medicine	(1924)	81.3
Comenian University, Bratislava, Czechoslovakia (formerly Poszony, Pressburg)	(1923)*	80.9

FAILED College	Year Grad.	Per Cent
Boston University School of Medicine	(1925)	67.9
Tufts College Medical School	(1923)	57.6
Fordham University School of Medicine	(1916)	70.8
McGill University Faculty of Medicine	(1924)	†
University of Montreal Medical Faculty	(1924)	68.8
University of Naples, Italy	(1919)* 49.4, (1922)*	66
Donskey University, Rostoff on Don, Russia	(1920)	66.2

ENDORSEMENT OF CREDENTIALS College	Year Grad.	Endorsement with
University of Alabama School of Medicine	(1909)	Georgia
Yale University School of Medicine	(1924, 2) New York,	N. B. M. Ex.
Northwestern University Medical School	(1923)	Illinois
University of Illinois College of Phys. and Surgs.	(1924)	New York
Johns Hopkins University Medical Department	(1912) (1917) Maryland, (1924) N. B. M. Ex.	New York
Harvard University	(1924)	N. B. M. Ex.
Tufts College Medical School	(1912), (1920), (1924)	Mass.
Columbia University College of Phys. and Surgs.	(1894) (1905) New York	Mass.
Fordham University School of Medicine	(1914)	New York
University of the City of New York	(1892)	New York
University of Pennsylvania School of Medicine	(1922)	New Jersey
Meharry Medical College	(1916)	Georgia
Laval University Faculty of Medicine	(1908)	Arizona
Undergraduate		New York

* Verification of graduation not completed by the American Medical Association.

† No grade given.

Virginia December Examination

Dr. J. W. Preston, secretary of the Virginia Board of Medical Examiners, reports the written examination held at Richmond, Dec. 8-11, 1925. The examination covered 9 subjects and included 90 questions. An average of 75 per cent was required to pass. Fourteen candidates were examined, all of whom passed. Nine candidates were licensed by reciprocity. The following colleges were represented:

PASSED College	Year Grad.	Per Cent
George Washington Univ. Med. School	(1924) 88.5, (1925)	86.6, 91.3
Howard University School of Medicine	(1925) 76,	85.8
Johns Hopkins University Medical Department	(1915)	84
Meharry Medical College	(1925)	82.8
University of Tennessee College of Medicine	(1925)	82.3

Medical College of Virginia.....(1925) 84.8
University of Virginia Department of Medicine.....(1924) 81.7, 89.8, (1925) 86.6, 86.6, 86.9

LICENSED BY RECIPROCITY

College	Year Grad.	Reciprocity with
George Washington University Medical School	(1920)	Dist. Colum.
Howard University School of Medicine	(1924)	Dist. Colum.
Johns Hopkins University Medical Department	(1922)	Maryland
Harvard University	(1906)	Dist. Colum.
University of Cincinnati College of Medicine	(1923)	Ohio
Western Reserve University School of Medicine	(1924)	Ohio
Lincoln Memorial University Medical Department	(1914)	Tennessee
McGill University Faculty of Medicine	(1915)	New Jersey

ENDORSEMENT OF CREDENTIALS

College	Year Grad.	Endorsement with
State University of Iowa College of Homeo. Med.	(1896)	U. S. Navy

Medical Economics

THE PHYSICIAN'S INCOME TAX—1926

The income tax provisions of the Revenue Act of 1926 became effective, Jan. 1, 1925. They make no change in the law as far as it relates specifically to physicians. The normal rate of tax under the new act is 1.5 per cent on the first $4,000 of net income in excess of the exemptions and credits, 3 per cent on the next $4,000, and 5 per cent on the remainder. Under the Revenue Act of 1924 the rates were 2, 4 and 6 per cent. The credit allowed on net earned income is the same as that allowed under the old act, 25 per cent.

A taxpayer whose gross income is under $5,000 and who is required to file a return, must do so on or before March 15. On gross incomes of $5,000 or more, the filing of the complete return may be deferred until May 15, *provided the taxpayer files a tentative return by March 15, accompanied by one fourth of the estimated tax.* Either the complete or tentative return must be filed by March 15 to avoid penalty. If a tentative return is filed, and when the complete return is filed the estimated initial instalment is found to be less than the amount that should have been paid, the taxpayer will be charged interest on the difference at the rate of 6 per cent per annum.

Full information concerning these and other matters of general interest appears on the official blank for returns, or can be obtained from collectors of internal revenue. The following discussion covers only matters relating specifically to the physician.

WHO MUST FILE RETURNS

1. Returns must be filed by every person having a *gross* income of $5,000 or more, regardless of the amount of his net income or his marital status. If the aggregate gross income of husband and wife, living together, was $5,000 or more, they must file a joint return or separate returns, regardless of the amounts of their joint or individual net incomes.

2. If *gross* income was less than $5,000, returns must be filed (*a*) by every unmarried person, and by every person married but not living with husband or wife, whose *net* income was $1,500 or more, and (*b*) by every married person, living with husband or wife, whose *net* income was $3,500 or more. If the aggregate net income of husband and wife, living together, was $3,500 or more, each may make a return or both unite in a joint return.

If the marital status of a taxpayer changed during the tax year, the amount of income necessary to bring him within the class required to make returns should be ascertained by inquiry of the local collector of internal revenue.

As a matter of courtesy only, blanks for returns are sent to taxpayers by the collectors of internal revenue, without request. Failure to receive a blank excuses no one from making a return; the taxpayer should obtain one from the local collector of internal revenue.

GROSS AND NET INCOMES: WHAT THEY ARE

Gross Income.—A physician's gross income is the total amount of money received by him during the year from professional work, regardless of the time when the services were rendered for which the money was paid, plus such money as he has received as profits from investments and speculation, and as compensation and profits from other sources.

Net Income.—Certain professional expenses and the expenses of carrying on any enterprise in which the physician may be engaged for gain may be subtracted as "deductions" from the gross income, to determine the net income on which the tax is to be paid. An "exemption" is allowed, the amount depending on the taxpayer's marital status during the tax year, as stated above. These matters are fully covered in the instructions on the tax return blanks.

Earned Income.—In view of the credit allowed on "earned" income, the physician should state accurately the amount of such income as distinguished from his receipts from other sources. "Earned" income means professional fees, salaries and wages received as compensation for personal services rendered. From this, in the computation of the tax, must be subtracted certain "earned income deductions." The difference is the "earned net income."

If the taxpayer's net income from all sources is not more than $5,000, this entire net income is considered as earned net income. If his entire net income is more than $5,000, he may claim credit for $5,000 of the total amount as earned net income, whether it was or was not in fact "earned" within the meaning of the term as defined in the preceding paragraph. But in no case shall the earned net income be considered to be more than $20,000.

The conditions relating to the computation of the tax on earned income are too elaborate to be stated here. In case of doubt, physicians should consult collectors of internal revenue.

DEDUCTIONS FOR PROFESSIONAL EXPENSES

A physician is entitled to deduct all current expenses necessary in carrying on his practice. The following statement shows what such deductible expenses are and how they are to be computed:

Office Rent.—Office rent is deductible. If a physician rents an office for professional purposes alone, the entire rent may be deducted. If he rents a building or apartment for use as a residence as well as for office purposes, he may deduct a part of the rental fairly proportionate to the amount of space used for professional purposes. If the physician occasionally sees a patient in his dwelling house or apartment, he may not, however, deduct any part of the rent of such house or apartment as professional expense; to entitle him to such a deduction he must have an office there, with regular office hours. If a physician owns the building in which his office is located, he cannot charge himself with "rent" and deduct the amount so charged.

Office Maintenance.—Expenditures for office maintenance, as for heating, lighting, telephone service and the services of attendants, are deductible.

Supplies.—Payments for supplies for professional use are deductible. Supplies may be fairly described as articles consumed in the using; for instance, dressings, clinical thermometers, drugs and chemicals. Professional journals may be classified as supplies, and the subscription price deducted. Amounts currently expended for books, furniture and professional instruments and equipment, "the useful life of which is short," may be deducted; but if such articles have a more or less permanent value, their purchase price is a capital expenditure and is not deductible.

Equipment.—Equipment comprises property of more or less permanent value. It may ultimately be used up, deteriorate or become obsolete, but it is not in the ordinary sense of the word "consumed in the using"; rather, it wears out.

Payments for equipment or nonexpendable property for professional use cannot be deducted. As property of this class may be named automobiles, office furniture, medical, surgical and laboratory equipment of permanent value, and instruments and appliances constituting a part of the physician's professional outfit and to be used over a considerable period of time. Books of more or less permanent value are regarded as equipment, and the purchase price is therefore not deductible.

Although payments for equipment or nonexpendable articles cannot be deducted, yet from year to year there may be charged off against them reasonable amounts as depreciation. The amounts so charged off should be sufficient only to cover the lessened value of such property through obsolescence, ordinary wear and tear, or accidental injury. If improvement to offset obsolescence and wear and tear or injury has been made, and deduction for the cost claimed elsewhere in the return, no claim should be made for depreciation.

No hard and fast rule can be laid down as to the amount deductible each year as depreciation. Everything depends on the nature and extent of the property and on the use to which it is put. Five per cent a year has been suggested as a fair amount for depreciation on an ordinary medical library. Depreciation on an automobile would obviously be much greater. The proper allowance for depreciation of any property is that amount which should be set aside for the tax year in accordance with a reasonably consistent plan, not necessarily at a uniform rate, whereby the aggregate of the amounts so set aside, plus the salvage value, will at the end of the useful life of the property in the business equal the purchase price of the property or, if purchased before March, 1913, its estimated value as of that date or its original cost, whichever may be the greater. The physician must in good faith use his best judgment and make such allowance for depreciation as the facts justify. Physicians who, from year to year, claim deductions for depreciation on nonexpendable property will do well to make annual inventories, as of January 1, each year.

Medical Dues.—Dues paid to societies of a strictly professional character are deductible. Dues paid to social organizations, even though their membership is limited to physicians, are personal expenses and not deductible.

Postgraduate Study.—The Commissioner of Internal Revenue holds that the expense of postgraduate study is not deductible.

Traveling Expenses.—Traveling expenses necessary for professional visits to patients are deductible. The Commissioner of Internal Revenue, however, still holds that traveling expenses incident to attendance at meetings of medical societies are merely personal expenses and therefore not deductible. Physicians who have expended money for traveling expenses to attend meetings of medical societies should make no deduction for the amount so expended, in computing their income taxes under current schedules. They are advised, however, either to make a memorandum on their income tax returns or to file a memorandum with them, showing in detail the amount so expended. Such a memorandum should show that payment of the tax on that amount has been demanded by the Commissioner of Internal Revenue and is made solely by reason of that demand, under protest and under duress. The physician filing such a memorandum should retain a copy of it. In event of any reversal of the commissioner's ruling, physicians who have made such records can more easily substantiate their claims for repayment. A physician who deducts traveling expenses or the expenses of postgraduate study must expect to have such deduction disallowed. He will then be compelled to pay the tax on the disallowance, with interest, or to appeal to the Board of Tax Appeals and possibly to the courts. If he appeals, he will in the end have to abide by the result.

AUTOMOBILES

Payment for an automobile is a payment for permanent equipment, and is not deductible. The cost of operation and repair, and loss through depreciation, are deductible. The cost of operation and repair includes the cost of gasoline, oil, tires, insurance, repairs, garage rental (when the garage is not owned by the physician), chauffeurs' wages, etc.

Deductible loss through depreciation is the actual diminution in value resulting from obsolescence and use, and from accidental injury against which the physician is not insured. If depreciation is computed on the basis of the average loss during a series of years, the series must extend over the entire estimated life of the car, not merely over the period in which the car is in the possession of the present taxpayer.

If the automobile is used for professional and also for personal purposes—as when used by the physician for recreation, or used by his family—only so much of the expense as arises out of the use for professional purposes may be deducted. A physician doing an exclusive office practice and using his car merely to go to and from his office cannot deduct depreciation or operating expenses; he is regarded as using his car for his personal convenience and not as a means of gaining a livelihood.

What has been said with respect to automobiles applies with equal force to horses and vehicles and the equipment incident to their use.

MISCELLANEOUS

Laboratory Expenses.—The deductibility of the expenses of establishing and maintaining laboratories is determined by the same principles that determine the deductibility of other corresponding professional expenses. Laboratory rental and the expenses of laboratory equipment and supplies and of laboratory assistants are deductible when under corresponding circumstances they would be deductible if they related to a physician's office.

Losses by Fire, etc.—Loss of and damage to a physician's equipment by fire, theft or other cause, not compensated by insurance or otherwise recoverable, may be computed as a business expense, and is deductible, provided evidence of such loss or damage can be produced. Such loss or damage is deductible, however, only to the extent it has not been made good by repair and the cost of repair claimed as a deduction.

Insurance Premiums.—Premiums paid for insurance against professional losses are deductible. This includes insurance against damages for alleged malpractice, against liability for injuries by a physician's automobile while in use for professional purposes, and against loss from theft of professional equipment, and damage to or loss of professional equipment by fire or otherwise. Under professional equipment is to be included any automobile belonging to the physician and used for strictly professional purposes.

Expense in Defending Malpractice Suits.—Expenses incurred in the defense of a suit for malpractice are deductible as business expense. Expenses incurred in the defense of a criminal action, however, are not deductible.

Sale of Spectacles.—Oculists who furnish spectacles, etc., may charge as income money received from such sales and deduct as an expense the cost of the article sold. Entries on the physician's account books should in such cases show charges for services separate and apart from charges for spectacles, etc.

Book Notices

THE MEDICAL DEPARTMENT OF THE UNITED STATES ARMY IN THE WORLD WAR. Volume XV, Statistics. Part two, Medical and Casualty Statistics Based on the Medical Records of the United States Army April 1, 1917, to December 31, 1919, Inclusive. Prepared under the Direction of Maj. Gen. M. W. Ireland, the Surgeon General. By Major Albert G. Love, M. C., U. S. Army. Cloth. Price, $3. Pp. 1368, with illustrations. Washington: Government Printing Office, 1925.

The Surgeon General's Office has completed the compilation of statistics for the World War period, and published them as part two of volume fifteen of "The Medical Department of the U. S. Army in the World War." The volume is a credit to all who took part in its compilation. There was an editorial board of twenty-eight reserve officers from various parts of the country, and regular army officers, with Col. Charles Lynch as editor in chief until his retirement, and then Lieut. Col. Frank W. Weed. The amount of detail gathered here about millions of men in camp in various parts of the world in time of war, and the careful work necessary to obtain it, are almost incomprehensible. There is an introductory chapter which explains the methods of collecting these statistics. It appears that in January, 1919, the strength of the army in Europe reached its maximum with 1,698,879 officers and enlisted men, at which time there were in the United States 789,636 officers and enlisted men; in this table the size of the army at home and in Europe is shown by months throughout the war. Tables show the number of troops by race and by states; maps show the location of camps, and other tables give the number of troops in these camps by months. There are many pages of tables giving the number of men admitted to sick report and the cause. It is especially interesting to note the number of cases of influenza that occurred in each camp. There is shown the ratio of men discharged for disability by months, race and cause. The number of deaths with their causes, the number of admissions to sick report by camps and by states, and the number of deaths by camps and by states are indicated. There are special tables for the influenza epidemic, showing its progress by month, with the number of admissions, complicating diseases and deaths. Finally there are tables by regiments with the number of wounds by gas and by gunshot, and the number killed in action by month. The great value of this book is apparent; its usefulness will increase with the years.

A SYNOPSIS OF MEDICINE. By Henry Letheby Tidy, M.A., M.D., B.Ch., Assistant Physician to St. Thomas's Hospital. Fourth edition. Cloth. Price, $6. Pp. 1000. New York: William Wood & Co., 1925.

In the fourth edition of this medical synopsis—probably the most complete book of its type—the author has made a number of rather important alterations. The discovery and use of insulin have necessitated extensive changes in the chapter on diabetes, and the work of MacNee and the French investigators has been included in the section on jaundice. Among the other chapters that have been revised extensively are those on botulism, visceroptosis, primary purpura and acholuric jaundice. New chapters have been added on the blood diseases of childhood, thrombosis and embolism. The author should perhaps be criticized for failing to include the recent work of Caronia, Dochez and the Dicks on the etiology and serum treatment of scarlet fever. The book should be of great assistance to the student who is preparing for examinations, to the teacher who is preparing a lecture, and to the practitioner who wishes to revise quickly his knowledge of some particular disease. The author correctly points out the failure which must result when one attempts to make any "synopsis" replace a textbook.

ERNÄHRUNG UND STOFFWECHSELKRANKHEITEN. Von Prof. Dr. Friedrich Umber, Aerztlicher Direktor des Krankhenhauses Westend. Third edition. Paper. Price, 39 marks. Pp. 672, with 67 illustrations. Berlin: Urban & Schwarzenberg, 1925.

This encyclopedic volume contains a tremendous amount of useful information written in a German style comparatively easy to read. The usual form of such volumes is adopted. The first chapter, devoted to foods and nutrition, is concise and is followed by detailed discussion of undernutrition and overnutrition, obesity, diabetes mellitus, the rarer disturbances in carbohydrate metabolism, diabetes insipidus, gout, nephrolithiasis, and disturbances in intermediary protein catabolism. Almost a hundred pages is devoted to Rosenberg's description of technic involved in metabolic examinations of urine, blood, stool and organs, chemical analysis of urinary stones and basal metabolism. One pleasing feature of the book is the constant clinical outlook. The few illustrations are well chosen. The references seem up to date, although, as is to be expected from continental sources, contributions other than from the native land do not receive the attention warranted by an international scientific outlook. The volume certainly deserves a place on the encyclopedia shelf of all interested in metabolism.

Books Received

Books received are acknowledged in this column, and such acknowledgment must be regarded as a sufficient return for the courtesy of the sender. Selections will be made for more extensive review in the interests of our readers and as space permits.

DIAGNOSTISCHE UND THERAPEUTISCHE IRRTÜMER UND DEREN VERHÜTUNG INNERE MEDIZIN. Herausgegeben von Prof. Dr. J. Schwalbe, Geh. San.-Rat in Berlin. Sechzehntes Heft. Die Krankheiten der Leber mit Einschlusz der hepatolienalen Affektionen. Von Professor Dr. H. Eppinger, Assistent an der I. Medizinischen Klinik, und Dozent Dr. P. Walzel, Assistent an der I. Chirurgischen Klinik Eiselsberg in Wien. Paper. Price, 7.20 marks. Pp. 134, with 10 illustrations. Leipsic: Georg Thieme, 1926.

Monograph on diseases of the liver, part of a German system of the practice of medicine.

LEHRBUCH DER LOKALANÄSTHESIE DES OHRES UND DER OBEREN LUFT- UND SPEISEWEGE. Von Dr. Caesar Hirsch, Chefarzt der Abteilung für Hals-, Nasen- und Ohrenkranke des Marienhospitals in Stuttgart. Mit einem Vorwort von Professor Dr. O. Voss, Direktor der Universitätsohrenklinik in Frankfurt a. M. Paper. Pp. 293, with 104 illustrations. Stuttgart: Ferdinand Enke, 1925.

Handsomely illustrated monograph of interest—chiefly to otolaryngorhinologists.

THE STOMACH AND UPPER ALIMENTARY CANAL IN HEALTH AND DISEASE. By T. Izod Bennett, M.D., M.R.C.P., Assistant Physician to the Middlesex Hospital. Cloth. Price, $6. Pp. 344, with illustrations. New York: William Wood & Co., 1925.

Monographic consideration by internist who prefers Sippy method of medical treatment.

SCHISTOSOMIASIS VEL BILHARZIASIS. By C. G. Kay Sharp, M.D., Fellow Royal Institute of Public Health. Cloth. Price, $2.75. Pp. 74. New York: William Wood & Co., 1925.

Outlines of schistosomiasis with system for mass study and treatment in schools.

LA CURIETHÉRAPIE DES CANCERS. Par Simone Laborde, Chef du laboratoire de radiumlogie au centre anticancéreux de Villejuif. Paper Price, 27 francs. Pp. 333, with 43 illustrations. Paris: Masson & Cie, 1925.

Radium therapy as practiced in a French cancer institute.

ABDOMINAL OPERATIONS. By Sir Berkeley Moynihan. Fourth edition. Two volumes. Cloth. Price, $20 net. Pp. 1217, with 470 illustrations. Philadelphia: W. B. Saunders Company, 1926.

Fourth edition of a standard work by a facile writer.

COMMONWEALTH HEALTH LABORATORIES. By W. C. Sawers, D.S.O., M.B., B.S., Medical Officer, Division of Laboratories, Commonwealth Department of Health. Commonwealth of Australia, Department of Health. Service Publication No. 27. Pp. 101. Melbourne: H. J. Green, 1925.

REPORT OF THE ENGINEERING BOARD OF REVIEW OF THE SANITARY DISTRICT OF CHICAGO ON THE LAKE LOWERING CONTROVERSY AND A PROGRAM OF REMEDIAL MEASURES. Part III. Appendix I. Sewage Disposal. An appendix to accompany chapter IV of Part II. Pp. 254. Boston: Wright & Potter, 1925.

TRANSACTIONS OF THE AMERICAN ASSOCIATION OF GENITO-URINARY SURGEONS. Thirty-seventh annual meeting, May 4-5, 1925, Washington, D. C. Volume 18. Pp. 517. Baltimore: Williams & Wilkins Company, 1925.

REPORT OF THE PROVINCIAL COMMITTEE OF THE NATIONAL BABY WEEK, BOMBAY PRESIDENCY, 1925. Pp. 85. Bombay Presidency, 1925.

Miscellany

SOME INSECTS AND THEIR RELATION TO MAN*

It is impossible to estimate the effect that insect activity has had on the human race. The device that has saved the greatest number of lives is the ordinary fly and insect screen. Insects have overthrown dynasties and even blotted out whole countries or civilizations or reduced them from a position of commanding superiority to one of helpless subordination. Greece, Mesopotamia, Egypt, Macedonia, the Mayans, Rome, the civilizations of southern Arabia, Peru, Rhodesia, Ceylon, Java, Indo-China and India have suffered decadence; and often a humble and despised insect carrying malaria and other diseases has been the cause of the trouble.

It is not many years since the interior of Africa was an unknown wilderness. Within this country was an area in which the dreaded trypanosomiasis was present. Trade channels were opened up, and at present the infection has spread over at least one fourth of the continent and thousands of miles have become depopulated. It is hoped that the tsetse fly will never gain access to this continent.

The proof of the intelligence of a race is its ability to raise itself above and protect itself from an adverse environment. The average expectancy of male life in the United States is about 50.6 years and in Sweden is about 50.9 years. In India it is about 23 years, and it would be less if the population was greater or the birth rate was higher. The combination of insects, ignorance and insanitation is the explanation.

Under proper precautions, inhabitants of temperate regions may emigrate to the tropics and live there without manifest injury. This requires the avoidance of mosquitoes and other insects, the constant use of boiled water, and many other precautions which at times are somewhat irksome. Those who comprehend their importance are less likely to ignore them. Yellow fever used to be the curse of the tropical and semitropical western hemisphere. The medical department of the United States Army realized that the first step in the control of the disease was to learn the method of transmission, and accordingly work was begun under the direction of Drs. Reed, Carroll, Lazear and Agramonte. Volunteers were called for from the soldiers and officers of the medical department who were not immune to the disease. Those who lost their lives are entitled to all the honor that can come to any soldier who has fallen on the field of battle. As a result of this work we now know how to prevent the spread of yellow fever. It is the plan of the Rockefeller Foundation to destroy all foci of yellow fever and banish it from the face of the earth.

The diseases that are transmitted by mosquitoes are malaria, yellow fever, filariasis and dengue fever. The general rules to be followed with mosquitoes are to:

(*a*) Prevent so far as possible all mosquito propagation.
(*b*) Kill all mosquitoes possible of those which do breed.
(*c*) Keep habitations away from mosquitoes and mosquitoes away from habitations.
(*d*) Protect the sick from mosquitoes.
(*e*) Protect the well from mosquitoes.

It was the application of these rules that made the building of the Panama Canal possible and life there as safe as in the temperate zones.

With us, the common house fly without question is the most frequent transmitter of disease. There are also biting flies that are responsible for the spread of other diseases. Among the diseases carried by the domestic fly are typhoid, cholera, amebic dysentery, gangosa and oriental sore, or Bagdad boil. In the first four diseases the fly transmits the infection by carrying organisms from the discharges of the sick to the food of the well. These diseases may be transmitted by other means, but the fly is a common method. These four diseases have been the cause of countless deaths.

Obviously, it is desirable to accomplish the same ends with flies as with mosquitoes, though different methods are necessary. Screens are of course a necessity to prevent their access to the sick and the well and to food supplies. All infected discharges from the sick should be sterilized before being disposed of. Fly swatters, fly paper, fly poison and traps all have their places.

There are a number of cousins of the domestic fly that cause harm. Yaws, or frambesia, filariasis, tularemia, or deerfly fever, cutaneous tropical myiasis and trypanosomiasis are transmitted by them. Tularemia is accompanied with high fever and is carried by a horsefly.

There are three kinds of fleas: those which live on the rat, those which live on the dog and those which live on man. They prefer their particular host but, if compelled by hunger, will go to another. Fleas transmit bubonic plague and leishmaniasis, or dum-dum fever. A good description of an epidemic of bubonic plague is to be found in first Samuel, fifth and sixth chapters. The expiation required of the Philistines was that they return the Ark of the Covenant to the Israelites along with five golden emerods or images of the characteristic swellings of the disease and five golden mice (or rats), the basis of the disease. During the reign of Justinian it was responsible for as many as 10,000 deaths in one day in Constantinople.

The dog, cat, ferret and weasel are the natural enemies of the rat and may be used in the campaign against it. All dumps should be eliminated, all drains should be screened, all food supplies should be protected, and all places that might harbor the rat should be cleaned up. There are many suitable poisons. Fleas may wander back and forth to a certain extent from the dog to the rat and vice versa, and here is a possible complication that must be considered. It is easy enough to deflea a dog, but it may be equally easy for him to find others to take their places.

Lice are prolific transmitters of disease. The Buddhist religion, which has millions of followers, teaches that no animal life should be destroyed. The spectacle of a Buddhist priest engaged in picking "cooties" from his body and laying them gently on a stone from which they migrate back again gives a perfect demonstration of the word "futility." The diseases more commonly transmitted by lice are typhus fever, trench fever, and a form of relapsing fever.

Typhus fever is common throughout the world, but the last thirty years has seen little of it in the United States, though it still is present in Mexico. The means employed of getting rid of "cooties" are known to every member of the American Expeditionary Forces. The tick is not a very common insect in settled parts of the United States, but is at times exceedingly pernicious. Rocky Mountain spotted fever is prevalent in certain parts of Wyoming and Idaho, and in the former state is accompanied by a mortality of from 75 to 90 per cent. In Idaho it is not nearly so fatal. The tick transmits this disease from squirrels and rats to man. The East and West African and the Persian types of relapsing fever are also transmitted by a tick.

The bedbug is responsible for the transmission of the European type of relapsing fever, which is found especially in Russia. There are other diseases for which insects are responsible, but those detailed are the more important ones. There is a certain beneficent effect which results to the human race from the possibilities of epidemics, plague and transmissible diseases. When any collection of people or any country so far degenerates as to lose all desire for cleanliness and hygiene and proper living and subsists in dirt and filth, it is only a question of time until an epidemic comes along and kills it off.

There is an old saying that "virtue is its own reward." One could well say that cleanliness has a much greater reward in the way of health and longer life and happiness.

* Abstract of address read before the Insecticide and Disinfectant Manufacturers Association, Hotel Astor, New York, Dec. 15, 1925, by M. A. Reasoner, M.D., Major, Medical Corps, U. S. Army.

Medicolegal

Connecticut Law and the Revocation of Certificates

(Brein v. Connecticut Eclectic Examining Board et al. (Conn.), 130 Atl. R. 289)

The Supreme Court of Errors of Connecticut, in holding that there was no error in a judgment which dismissed the plaintiff's petition to review the action of the Connecticut eclectic examining board and the state board of health in revoking his license to practice medicine in that state, says that, under the Connecticut law no person, not holding a certificate of registration issued by the state board of health, may practice the profession of medicine and surgery in the state. It has been the policy of the general assembly to leave the examination and approval of applicants for such certificates to committees of the several state medical societies representing different schools of practice, subject to the conditions prescribed in Sections 2855-57 of the general statutes of the state, and to authorize the state board to issue a certificate of registration on due notice from one of such examining committees that the applicant has passed the required examination and is otherwise qualified. No independent investigation of the merits of the applicant is required either by the state board of health or any other state authority. Such a policy throws a heavy burden of responsibility on the examining committees of the several state medical societies, for while some of these societies, at least, have their grievance committees for the discipline and possible expulsion of offending members, such committees are not clothed with statutory authority to require the attendance of witnesses.

Perhaps the most fundamentally essential requisite for admission to a profession whose practitioners are necessarily brought into a close fiduciary relation to their patients is that the applicant should be of good moral character, and no more conclusive evidence of utter unfitness to practice medicine can be imagined than proof that the applicant procured by fraud the certificate of registration which admits him to practice.

It is quite true that the issuance of the certificate confers on its possessor a special privilege, whose value cannot be measured in money alone, and of which he cannot justly be deprived without due notice and full opportunity to be heard. On the other hand, since the examining committee of each school of medicine is charged by law with the sole responsibility of approving the fitness of applicants to practice according to its tenets, the subsequent unanimous withdrawal of such approval is an act of great significance; and when the reason given for such withdrawal is that the approval of the applicant's fitness by the committee was procured by fraud, the action of the committee is equivalent to an authoritative declaration that its original approval, which is the statutory condition precedent for the issuance of the certificate, was never truly and in reality given, and that the statutory precautions for the public health and welfare have been evaded. The situation thus developed is one so imminently dangerous to the public health and welfare that the general assembly has authorized the board of health summarily to revoke the certificate. But the revocation is provisional, and not final, for Section 2860 of the general statutes provides for an appeal to the superior court, where the matter may be reexamined de novo (anew), "which court may grant the proper relief."

The supreme court of errors is unable to perceive that any constitutional rights of the plaintiff had been violated by this method of procedure. He elected to appeal from the doings of the state board of health to the superior court, where he had his day in court and was found guilty of having procured his certificate of registration by fraud. He contended that, although the statute does not authorize, much less require, the eclectic examining board to give any notice or hold any preliminary hearing before requesting the board of health to revoke a certificate of registration, such provisions must be read into the statute by construction. But the court thinks not. As to the right to a hearing, the accepted rule is that one hearing before judgment, if conducted in accordance with the fundamentals of judicial procedure, satisfies the constitutional requirement. The receipt of the notice of revocation by the board of health conferred an immediate right of appeal, which, being pursued, gave the plaintiff the hearing before judgment to which he was entitled. Indeed, it was enough that it gave him the opportunity to be heard. The requirement of section 2859 of the general statutes that the revocation of a certificate of registration should be on the written request of all the members of the examining board was satisfied when the request was signed by four members of the board, when a vacancy caused by the death of the fifth member had not then been filled.

Allowing for Future Medical Treatment

(Halley v. Federal Truck Co. (Mo.), 274 S. W. R. 507)

The St. Louis Court of Appeals, in affirming a judgment in favor of the plaintiff for $5,000 damages for personal injuries, says that the defendant contended that the plaintiff's instruction on the measure of damages was erroneous for the reason that it permitted a recovery for such medical treatment as the jury might find that the plaintiff "will in the future be required to have." It was argued that there was a total failure of proof as to such special damage; but this court is of the opinion that there was substantial testimony on which that part of the instruction in question could rest. The evidence was undisputed that the plaintiff had only light perception in his left eye, that the retina was detached on one side, that this condition was permanent, and that at the time of the trial of the case—almost fourteen months after the date of his injury—whenever the plaintiff became warm at his work he experienced a severe pain in his left eye, and his right eye would "flood up" so that it was impossible for him to see "for a little bit" out of it. The question as to whether or not future medical attention would be required under such circumstances was properly left to the common sense, consciences, experience and judgment of the jury, for no evidence could have been introduced by which that fact could have been proved to an absolute certainty. It has been held that future expenses for medical attention rest on the same grounds as the probable loss of future earnings, and that if a defendant wishes to limit the amount of recovery for future medical services, he should test out his right to do so by asking an appropriate instruction.

Society Proceedings

COMING MEETINGS

AMERICAN MEDICAL ASSOCIATION, Dallas, April 19-23. Dr. Olin West, 535 N. Dearborn Street, Chicago, Secretary.

Alabama, Medical Association of the State of, Mobile, April 27-30. Dr. D. L. Cannon, 519 Dexter Avenue, Montgomery, Assistant Secretary.

American Association for the Study of Allergy, Dallas, April 20. Dr. A. H. Rowe, 242 Moss Avenue, Oakland, Calif., Secretary.

American Association of Pathologists and Bacteriologists, Albany, New York, April 2-3. Dr. H. T. Karsner, Lakeside Hospital, Cleveland, Secretary.

American Orthopedic Association, Atlanta, April 26-28. Dr. De Forest P. Willard, 1630 Spruce Street, Philadelphia, Secretary.

American Proctologic Society, Indianapolis, April 16-17. Dr. William A. Rolfe, 331 Beacon Street, Boston, Secretary.

American Society of Clinical Pathologists, Dallas, April 15-17. Dr. Ward T. Burdick, Metropolitan Building, Denver, Colo., Secretary.

Arizona Medical Association, Globe, April 25-27. Dr. D. F. Harbridge, 407 Goodrich Building, Phoenix, Secretary.

California Medical Association, Oakland, April 26-May 1. Dr. Emma W. Pope, 593 Market Street, San Francisco, Secretary.

Hawaii Territorial Medical Association, Honolulu, April 25-28. Dr. F. J. Pinkerton, 46 Young Building, Honolulu, Secretary.

Louisiana State Medical Society, Monroe, April 15-17. Dr. P. T. Talbot, 1551 Canal Street, New Orleans, Secretary.

Maryland, Medical and Chirurgical Faculty of, Baltimore, April 27-29. Dr. J. A. Chatard, 1211 Cathedral Street, Baltimore, Secretary.

Medical Women's National Association, Dallas, April 18-19. Dr. Lena K. Sadler, 533 Diversey Parkway, Chicago, Secretary.

New York, Medical Society of the State of, New York City, March 29-April 1. Dr. D. S. Dougherty, 17 W. 43d St., New York City, Sec'y.

Oregon State Medical Society, Portland, April 1-2. Dr. F. D. Stricker, Medical Arts Building, Portland, Secretary.

South Carolina Medical Association, Sumter, April 6-8. Dr. E. A. Hines, Seneca, Secretary.

Current Medical Literature

AMERICAN

The Association library lends periodicals to Fellows of the Association and to individual subscribers to THE JOURNAL for a period of three days. No foreign journals are available prior to 1920, nor domestic prior to 1923. Periodicals published by the American Medical Association are not available for lending, but may be supplied on order. Requests should be accompanied by stamps to cover postage (6 cents if one and 12 cents if two periodicals are requested).

Titles marked with an asterisk (*) are abstracted below.

American Journal of Anatomy, Philadelphia

36: 399-490 (Jan.) 1926

Postnatal Growth of Kidney; Number and Size of Glomeruli (Albino Rat). M. Arataki, Philadelphia.—p. 399.

*Compensatory Enlargement of Surviving Kidney After Unilateral Nephrectomy. M. Arataki, Philadelphia.—p. 437.

Embryogenesis of Human Bile Capillaries and Ducts. W. Bloom, Chicago.—p. 451.

Placentation of Platyrrhine Monkey (Ateles Geoffroyi). G. B. Wislocki, Baltimore.—p. 467.

Growth of Remaining Kidney After Nephrectomy.—After experimental unilateral nephrectomy, Arataki says, the surviving kidney became enlarged. The enlargement is mainly due to the hypertrophy of glomerular unit systems, and in this hypertrophy the lengthening of the convoluted and collecting tubules plays an important part, but it is also due to the hyperplasia of the supporting tissue and in some measure to both the hypertrophy and the hyperplasia of the cells lining the tubules.

Annals of Otology, Rhinology and Laryngology, St. Louis

39: 1013-1308 (Dec.) 1925

Facts of Audition. I. H. Jones and V. O. Knudsen, Los Angeles.—p. 1013.

Cysts in Floor of Mouth. O. J. Stein, Chicago.—p. 1028.

Results in Radical Mastoid Operations as to Hearing. P. Hammond, Boston.—p. 1043.

Vaccines from Hemolytic Cocci in Spheno-Ethmoidal Disease. R. A. Fenton, Portland, Ore.—p. 1051.

Prevention of Chronic Middle Ear Suppuration. G. W. Mackenzie, Philadelphia.—p. 1068.

Intranasal and External Methods of Operating on Ethmoid Cells. R. H. Skillern, Philadelphia.—p. 1077.

Diagnosis of Lateral Sinus Thrombosis. C. C. Eves, Philadelphia.—p. 1082.

Diagnosis and Treatment of Atopic Coryza (Perennial Hay-Fever). W. C. Spain, New York.—p. 1089.

Relation of Tonsil Infection to Nephritis in Children. O. L. Thorburn, Iowa City.—p. 1096.

Status of So-Called Middle Turbinate. J. A. Pratt, Minneapolis.—p. 1105.

Three Cases of Otitic Brain Abscess. S. Mac C. Smith, Philadelphia.—p. 1109.

Therapeutic and Prophylactic Value of Tonsillectomy in Active Stage of Vincent's Angina. S. B. Westlake, St. Louis.—p. 1121.

Malignancy of External Nose: Case of Roentgen-Ray Origin. R. A. Barlow, Madison, Wis.—p. 1150.

Translucent Normal Ear Drums. M. Metzenbaum, Cleveland.—p. 1159.

Otolaryngology in Relation to General Medicine: Cases of Scurvy and Bronchiectasis. B. R. Shurly, Detroit.—p. 1173.

Insulin in Diabetes with Mastoiditis. T. C. Galloway, Evanston, Ill.—p. 1184.

Repeated Coryzas, Prophylaxis and Treatment. Butte, Mont.—p. 1192.

Extranasal vs. Intranasal Operation for Chronic, Suppurative Frontal Sinusitis. F. Stauffer, Salt Lake City.—p. 1206.

Optic Canal in Optic Atrophy. L. E. White, Boston.—p. 1210.

Problem of Middle Ear Mechanics. III. Binaural Acuity for Air and Bone Transmitted Sound Under Varying Conditions in External Auditory Canal. A. G. Pohlman and F. W. Kranz, Geneva, Ill.—p. 1224.

Cholesteatoma of Middle Ear. F. R. Nager, Zurich, Switzerland.—p. 1249.

Orbital Cellulitis Complicating Paranasal Sinus Disease in Children: Cases. T. R. Gittins, Sioux City, Iowa.—p. 1259.

Archives of Dermatology and Syphilology, Chicago

13: 1-136 (Jan.) 1926

Dermatologic Quackery. H. Fox, New York.—p. 1.

"Keratodermie Blennorrhagique" (Vidal): Case. C. B. Willmott, Louisville, Ky.—p. 17.

Histopathology of Syphilitic Hypoplasia of Teeth. L. J. Karnosh, Cleveland.—p. 25.

*Gold Compounds in Treatment of Experimental Tuberculosis of Skin in Animals. J. F. Schamberg, M. J. Harkins and H. Brown, Philadelphia.—p. 43.

Ulcus Vulvae Acutum (Lipschütz): Case. C. W. Finnerud, Chicago.—p. 55.

*Madura Foot (Mycetoma): Black Grain Variety in Native American. J. A. Gammel, H. Miskdjian and H. S. Thatcher, Cleveland.—p. 66.

Xanthoma with Erythema Telangiectodes and Parapsoriasis. S. S. Greenbaum, Philadelphia.—p. 78.

*Ichthyosis Congenita: Unusual Complications. L. B. Kingery, Portland, Ore.—p. 90.

Psoriasis in Full-Blooded Negro. M. B. Parounagina, New York.—p. 106.

Salicin Treatment of Psoriasis. G. Pernet, London.—p. 111.

So-Called Herxheimer Reactions. K. Herxheimer and H. Martin, Frankfort-on-the-Main, Germany.—p. 115.

Gold Therapy in Tuberculosis.—While no absolute deductions can be drawn from the experiments reported by Schamberg et al., the authors believe, however, that they indicate that a favorable, though not curative, influence is induced by gold therapy in tuberculosis.

Madura Foot in Native American.—Gammel et al. report a case of infection with the granuloma maduromycosis (mycetoma) in a native American (Mexican) from Texas. This is the twenty-first case reported from the United States and the eleventh from Texas. The infection was of the black grain variety—the first thus far reported in a native American and the second black grain infection reported on the North American continent. All attempts at animal inoculations were negative—using monkeys (*Macacus rhesus*), rabbits, guinea-pigs, white rats, white mice and pigeons. Cultural experiments thus far carried out lead the authors to classify the causative organism with the madurella group (Brumpt), and because of its characteristics as a new species which they would term *Madurella americana*.

Congenital Ichthyosis and Colloidal Skin.—Kingery reports a case which includes clinical characteristics both of ichthyosis congenita and so-called "colloidal skin." Such a clinical combination is said not hitherto to have been recorded, and definite cases of colloidal skin are practically wanting in American literature. The existence of the epitrichium in certain mammals and the presence of its analogy in human embryos would suggest the possibility of the persistence of this membrane as a partial explanation of the foregoing picture. The rôle played by the endocrine glands or their interrelation in the production of such cutaneous anomalies is suggested.

Archives of Neurology and Psychiatry, Chicago

15: 1-150 (Jan.) 1926

*Neuron Destruction in Postencephalitic Paralysis Agitans. J. C. McKinley, Minneapolis and L. R. Gowan, Duluth, Minn.—p. 1.

Cerebral Symptoms Induced by Angioneurotic Edema: Three Cases. F. Kennedy, New York.—p. 28.

*Trichinosis Encephalitis. G. B. Hassin and I. B. Diamond, Chicago.—p. 34.

Differential Diagnosis Between Cerebral Degeneration, Infiltrating Cerebral Neoplasm and Infiltrating Cerebral Neoplasm with Degeneration. H. A. Riley and C. A. Elsberg, New York.—p. 48.

*Brain Repair. R. B. Wilson, Boston.—p. 75.

Hypophysial Fat Dystrophy with Hyperglycemia and Glycosuria: Case. S. Shapiro and M. G. Kliatsheo, New York.—p. 85.

*Roentgen-Ray Treatment of Pituitary Tumors. E. B. Towne, San Francisco.—p. 92.

Amyostatic Syndrome of Epidemic Encephalitis: Blood Sugar Tolerance Studies. T. Raphael, O. M. Searle and W. G. Ferguson, Ann Arbor, Mich.—p. 103.

Thrombosis of Rolandic Vein: Case. C. E. Dowman, Atlanta, Ga.—p. 110.

Pathology of Postencephalitic Paralysis Agitans.—In two additional cases of postencephalitic paralysis agitans studied by ordinary histologic methods, minimal changes of the globus pallidus but massive lesions of the substantia nigra were found by McKinley and Gowan. Scattered lesions found in other parts of the brain were insignificant. These two cases and a previously reported case have been studied by micrometric methods in order to evaluate quantitatively the amount of cell destruction in the lenticular region and substantia nigra. No decrease in the number of cells in the putamen or globus pallidus could be demonstrated. An average decrease in the number of neurons of from 58 per cent to 87 per cent occurred in the substantia nigra in the three cases. From these data it appears that the syndrome of paralysis agitans may occur without a significant lesion in the globus pallidus, though this is not intended to mean that the globus pallidus never plays a rôle in parkinsonism.

The destruction in the substantia nigra seems to be the essential factor in the production of the syndrome, at least in the three cases presented.

Trichinosis Encephalitis.—The case recorded by Hassin and Diamond is said to be the second in the literature in which the invasion of the brain by trichina larvae has been demonstrated, together with its effect on the central nervous system.

Brain Repair.—The reaction produced in two general paralytic brains by punctures with sterile needles for the purpose of introducing arsphenaminized serum into the ventricles is described by Wilson. The first patient received one puncture six days before death; the second received six punctures at intervals of from seven to eleven and a half months before death. The trephine openings were made over the right second frontal convolutions. It appears that the brain is not damaged by injecting arsphenaminized serum into the ventricles except by the needle itself. Observations in these cases are in keeping with previous reports that repair is accomplished by connective tissue elements.

Roentgenotherapy of Pituitary Tumors.—Towne reports two cases which, after periods of more than three and two years, respectively, of roentgen-ray treatment, remain free from the effects of intracranial extension of pituitary adenomas. The visual fields and visual acuity returned to normal following cross-fire treatment with one third of a maximum skin dose of roentgen rays once a month. No recurrence has taken place up to the present time, three and one fourth and two years, respectively, after the treatments were started. In the first case, a partial external ophthalmoplegia disappeared promptly, and measurable decrease in the size of the large intracranial extension of the tumor was demonstrated by shifting of areas of calcification in roentgenograms taken before, and two and a half years after, the institution of treatment.

Archives of Ophthalmology, New Rochelle, N. Y.

55: 1-102 (Jan.) 1926

Clinical Value of Optic Canal Roentgenograms. H. A. Goalwin, New York.—p. 1.
Ocular Symptoms of Erythremia (Chronic Polycythemia Vera). G. E. de Schweinitz, Philadelphia, and A. C. Woods, Baltimore.—p. 21.
Glaucoma in Myopic Eyes. A. Knapp, New York.—p. 35.
Separation of Choroid: Spontaneous Case. F. H. Verhoeff and J. H. Waife, Boston.—p. 38.
Ophthalmoplegia Internuclearis: Case. E. B. Dunphy, Boston.—p. 54.
Percentage Value of Vision: Snellen Notation. J. A. C. Gabriels, Albany.—p. 58.
Convention of English Speaking Ophthalmological Societies. H. Dickinson, London.—p. 64.

Archives of Pathology and Laboratory Medicine, Chicago

1: 1-168 (Jan.) 1926

*Intercellular Substances in Experimental Scorbutus. S. B. Wolbach and P. R. Howe, Boston.—p. 1.
*Amyloidosis Produced by Injections of Proteins. R. H. Jaffe, Chicago. —p. 25.
*Hypernephroma of Thyroid. A. Kolodny, Iowa City.—p. 37.
Rôle of Endothelium in Production of Polyblasts (Mononuclear Wandering Cells) in Inflammation. F. J. Lang, Chicago.—p. 41.
*So-Called Acrodynia or Erythredema (Swift's Disease). A. S. Warthin, Ann Arbor, Mich.—p. 64.
*Fat Replacement of Glycogen in Liver as Cause of Death. E. R. Le Count and H. A. Singer, Chicago.—p. 84.
William Wood Gerhard Gold Medal of Philadelphia Pathological Society. E. B. Krumbhaar, Philadelphia.—p. 90.
Control Method in Staining Smears for Tubercle Bacilli. H. J. Corper, Denver.—p. 93.
Relation of Atopic Hypersensitiveness (Hay-Fever, Asthma) to Anaphylaxis. A. F. Coca, New York.—p. 96.

Intercellular Substances in Experimental Scorbutus.—The morphologic concomitants of the condition of complete scorbutus and the immediate responses in repair are described by Wolbach and Howe. Their work establishes the hypothesis of Aschoff and Koch and confirms some of the observations of Höjer. They advance the theory that the failure of cells to produce intercellular substance in scorbutus is due to the absence of an agent common to all supporting tissues, which is responsible for the setting or jelling of a liquid product. Antiscorbutic substance is liberated in the destruction of tissues. The osteoporosis suggests, further, the hypothesis that this reaction is in some degree a reversible one.

Proteins Cause Experimental Amyloidosis.—By means of intramuscular injections of nutrose or serum given over a certain period of time, Jaffe was able to produce amyloid degeneration in mice. The conclusion is drawn that this amyloidosis results from an acquired hypersensitiveness to the injected substance. After more than seventy injections the amyloidosis becomes most extensive, even the valves of the heart being affected. An endothelial resorption of the amyloid finally takes place in the liver, even though the injections are continued.

Hypernephroma of Thyroid.—Statistics based on a study of 74,335 necropsies show that one case of malignant tumor of the thyroid is found in about 385 necropsies. The largest majority of malignant tumors of the thyroid seem to be of a primary character. A metastatic involvement of the thyroid is rather a curiosity. Among all malignant tumors giving rise to metastases in the thyroid, hypernephroma is the rarest. Kolodny asserts that from the world literature only one case of a metastatic involvement of the thyroid by hypernephroma is known. It occurred in a patient, aged 74, with a bilateral hypernephroma of the kidneys. He reports a case occurring in a woman, aged 68. A most careful general examination of the patient and roentgenoscopy of the skeleton did not help in the search for the primary tumor. After lobectomy, the patient improved markedly, and there does not seem to be any evidence of a recurrence of the tumor in the thyroid eleven months after the lobectomy.

Swift's Disease; Acrodynia; Erythredema.—Two clinically typical cases of "acrodynia" or "erythredema" which came to necropsy are reported by Warthin. The essential pathologic changes in these two cases were: extreme edema and slight meningeal irritation of the central nervous system, chronic erythma of the skin with hyperkeratosis, hypertrophy of the epidermis and sweat glands, with slight pigmentation of the rete, occurring in children of the hypoplastic lymphatic constitution, with associated or terminal respiratory infections and gastro-intestinal catarrh and inanition. These two cases do not support the theory of a polyneuritis as the essential feature of the disease; neither do they justify the use of the term "erythredema" as a fitting designation, as they showed no edema of the corium. They do not present any evidence as to a specific infectious etiology; they likewise show no relationship between tonsillar disease and the syndrome. The changes in the skin and central nervous system suggested the pathologic change of the early erythema stage of pellagra. The changes in the skin are also identical with those seen in certain forms of light sensitization, xeroderma and fagopyrism. They are also identical with certain stages of roentgen ray and ultraviolet ray erythemas. The entire anatomic picture in these two cases suggests either a food deficiency or a toxic state action on persons of the hypoplastic constitution, affecting the reticulo-endothelial system of meninges and skin, the vegetative nervous system and possibly leading to a light sensitization.

Fatty Liver as Cause of Death.—Le Count and Singer state that with an extensive replacement of the liver by fat in persons who drink heavily of alcoholic beverages death may be entirely unexpected and abrupt and with few symptoms of illness. In postmortem examinations of such persons, little else than a large fatty liver may be found to explain death.

Archives of Surgery, Chicago

2: 649-808 (Nov.) 1925

*Experimental Hydronephrosis: Effect of Changes in Blood Pressure and in Blood Flow on Rate of Development. I. F. Hinman, San Francisco, and A. B. Helper, Seattle, Wash.—p. 649.
*Roentgen-Ray Study of Injected Knee Joint. R. Colp and P. Klingenstein, New York.—p. 660.
Hirschsprung's Disease, or Congenital Megacolon: Case. O. Hofmann and G. H. Ewell, Kansas City, Mo.—p. 674.
Adenomyoma of Umbilicus: Case. C. R. Edwards and H. R. Spencer, Baltimore.—p. 684.
*Relation of Bone Marrow to Lymphatic System: Rôle in Spreading of Carcinomatous Metastases Throughout Skeleton. A. Kolodny, Iowa City.—p. 690.
Local Atrophy as Anomaly of Bone Metabolism. J. Ferber, New York. —p. 708.
*Accessory Lobes of Liver: Case. T. S. Cullen, Baltimore.—p. 718.

Congenital Deficiency of Pericardium. R. L. Moore, Boston.—p. 765.
*Effect of Magnesium Sulphate on Cerebrospinal Fluid Pressure and Brain Volume. E. J. Morrissey, Richmond, Va.—p. 778.
*Gastrojejunocolic Fistulas. J. Verbrugge, Rochester, Minn.—p. 790.

Experimental Hydronephrosis.—Hinman and Helper found it possible to reduce urinary secretion by a properly placed, partially obstructing rubber tube on the renal artery. When this procedure is combined with total ligation of the ureter on the same side, hydronephrosis develops to a much greater degree and more rapidly than when the ureter alone is ligated. This increase in the rate of development of hydronephrotic atrophy in the presence of a reduced secretory pressure and oliguria indicates that back pressure and pressure atrophy have not quite the importance generally given but that another factor, a nutritional one, is an equally or more determining one.

Study of Injected Knee Joint.—In an effort to determine the relationships of the bursae to the joint cavity, the femur and the tibia, especially during flexion and extension of the knee, a roentgenologic investigation of 100 injected knee joints was undertaken by Colp and Klingenstein. With the knee extended, the joints usually perforated when they were distended beyond a capacity of 100 cc., the injected mixture escaping through an opening in the apex of the suprapatellar bursa and diffusing upward along the femur beneath the crureus muscle. A distended joint, when it was forcibly flexed, perforated through the posterior condylar prolongations of the synovial membranes into the popliteal space running upward and downward in the manner of a collar button abscess, the area being increased by active motion of the joint. These anatomic facts have a wide and important practical application. In operative procedures around the lower end of the femur, especially in infective processes, the knee joint can be avoided by attacking the focus laterally and as far posteriorly as possible. In this way, the primary incision may be deepened until the periosteum is reached, and this may be stripped mesially without entering the joint, care being taken to avoid the femoral vessels. In inserting Steinmann's nails or tongs for skeletal traction in fractures of the femur, the relationship of these bursae should always be borne in mind in order to avoid entering the joint. Compound fractures in this region, within from 10 to 12 cm. of the joint line may enter the suprapatellar bursa.

Relation of Bone Marrow to Lymphatic System.—The bone marrow is directly related to the lymphatic system. It drains its lymph into certain groups of lymph nodes, the regional lymph nodes of the respective bone. The direct relationship existing between the bone marrow and the lymphatic system, Kolodny says, forms the anatomic basis for the lymphogenous theory of metastasizing of carcinomatous tumors to the bones. Deviations from the normal in the flow of lymph, namely, the aberration of the lymph stream, the retrograde lymph stream and the reflux lymph flow, can lead to the metastatic spreading through the skeleton of carcinomatous cells transported in the lymph circulation from the primary tumor.

Accessory Lobes of Liver.—Cullen reports a case of accessory hepatic lobe, springing from the surface of the gallbladder, and reviews the literature.

Effect of Magnesium Sulphate on Cerebrospinal Fluid Pressure.—Experiments conducted by Morrissey for the purpose of determining the effects of magnesium sulphate on intracranial pressure showed that, in man, 45 Gm. of magnesium sulphate crystals by mouth does not cause a drop in cerebrospinal fluid pressure in two hours. In experimental animals, a rise of pressure is noted, following the opening of the abdomen and manipulation of the intestines, but this rise quickly disappears when the intestines are replaced and the abdomen is closed. A slight fall in intracranial pressure was noted in a few animals over a fairly long period of observation. This fall in intracranial pressure coincides with a continuing fall of blood pressure. Apparently, brain volume is not changed in forty minutes following the injection of a large amount of magnesium sulphate into the small intestine. It appears that the brain tissue is subjected to the same dehydrating effects of magnesium sulphate, when injected into the intestine, as the other tissues of the body. The experiments show that hypertonic sodium chloride solution given intravenously has an effective action in reducing intracranial pressure.

Gastrojejunocolic Fistulas.—Twenty-one cases of gastrojejunocolic fistulas have been observed at the Mayo Clinic; two were associated with a carcinoma of the colon, and nineteen were the result of a gastrojejunal ulcer which developed after posterior gastro-enterostomy. All the patients were males. The etiologic factor, in the second group, was a duodenal ulcer in sixteen cases, gastric ulcer in one, atony of the stomach in one, and, in the remaining case, the primary disease was not known.

Arkansas Medical Society Journal, Little Rock

22: 173-202 (Jan.) 1926

Appendicitis: Plea for Early Operation. E. H. Hunt, Clarksville.—p. 173.
Dozen Don'ts for Doctor. J. W. Scales, Pine Bluff.—p. 179.
Sodium Citrate in Treatment of Pneumonia. S. C. Grant, Mulberry and W. G. Weaver, New Orleans.—p. 180.
Tonsil Problem. R. C. Kory, Little Rock.—p. 184.

Boston Medical and Surgical Journal

194: 1-42 (Jan. 7) 1926

Rope Grafts. F. H. Lahey, Boston.—p. 1.
Kahn and Wassermann Reactions. W. A. Hinton, Boston.—p. 5.
Treatment of Eclampsia. S. Berman, Boston.—p. 7.

194: 43-90 (Jan. 14) 1926

*Chronic Nephritis Produced by Roentgen Rays. J. P. O'Hare, H. Altnow, T. D. Christian, Jr., A. W. Calhoun and M. C. Sosman, Boston.—p. 43.
*Study of Twenty-Six Cases of Diabetes. H. F. Root and S. Warren, Boston.—p. 45.
*Differential Diagnosis of Lateral Sinus Infection. G. L. Tobey, Jr., Boston.—p. 53.
Corn Kernel in Bronchus. L. Richards, Boston.—p. 57.
Massive Atelectasis of Lung as Surgical Complication. E. L. Hunt, Worcester.—p. 58.

Roentgen Ray Produces Experimental Nephritis.—O'Hare et al. have succeeded in producing in laboratory animals a progressive sclerosis of the kidney of marked degree and under controlled conditions by exposing the kidney to roentgen-ray irradiation.

Cause of Death in Diabetes Mellitus.—The causes of death in twenty-two of the twenty-six cases of diabetes analyzed by Root and Warren were complications of diabetes rather than the disease itself. Arteriosclerosis was present in twenty cases. Gangrene occurred in seven. Coronary sclerosis and myocarditis were present in eleven cases. Vascular disease was more closely related to the duration of diabetes than to the age at onset of the disease. Cholelithiasis and cholecystitis occurred in 32 per cent of the patients over 25 years of age. Thirteen cases showed hyalinization of the islands of Langerhans. Only one of these patients was under 45. Five showed varying degrees of sclerosis of the islands. In three cases there was slight lymphocytic infiltration about scattered islands, and the islands in five cases appeared normal, though decreased in number in two of the five. Apparently normal islands are present in all diabetic pancreases examined, no matter how badly damaged the bulk of the islands may be. In two patients, insulin treated for more than five months, there seemed to be more islands of normal appearance than in patients under dietary treatment alone. The character of the lesions in the islands of Langerhans suggests a toxic origin acting over a long period of time or a prolonged functional strain. In hemochromatosis there is definite evidence of regeneration of both the acinar tissue and island tissue of the pancreas. The type of diabetes in hemochromatosis is the same as that in diabetes mellitus. The increased fibrous tissue found in certain pancreases in diabetes is due to destruction of island or acinar cells or both, with persistence and condensation of their stroma. The parenchymal tissue regenerates and forms new stroma, with resulting increase in connective tissue. The acinar tissue of the pancreas does not show evidence of increased fibrosis in cases of diabetes of short duration. Analyses of the insulin content of various tissues are presented. The influence of increased blood lipoids, especially cholesterol, on vascular disease and cholelithiasis is suggested.

Lateral Sinus Infection.—When, during the course of an aural infection, there is evidence of sepsis, Tobey says infec-

tion of the lateral sinus or jugular bulb must be considered. Evident sepsis being present and a careful differential diagnosis having excluded all other sources, ligation of the jugular and exploration of the lateral sinus is indicated. When obstruction of the lateral sinus, jugular bulb, or internal jugular vein occurs, block may be demonstrated by dynamic studies of the cerebrospinal fluid. The manometric studies on the fluid have proved reliable in the case of complete block and highly suggestive in the case of incomplete block, not only in determining the presence of thrombosis but also as criteria as to which side is involved. Absence of block as determined by spinal fluid tests is also of value in the differential diagnosis of sinus thrombosis. The test has proved of special value in cases presenting double mastoiditis developing symptoms of lateral sinus thrombosis. While theoretic dangers must be admitted in carrying out this procedure, in eighty-four cases Tobey has not seen evidence of ill effect from the technic.

Georgia Medical Association Journal, Atlanta

15: 1-40 (Jan.) 1926

Treatment of Syphilis in Children: Intraperitoneal Injection of Neo-Arsphenamine and Mercurosal. J. Yampolsky and G. F. Klugh, Atlanta.—p. 1.
Physiologic Pigmentation of New-Born. M. H. Roberts, Atlanta.—p. 4.
Pyuria in Infants and Children. W. W. Anderson, Atlanta.—p. 9.
Orthopedic Treatment of Arthritis. T. Toepel, Atlanta.—p. 13.
Salient Points in Treatment of Syphilis. W. P. Jordan, Columbus.—p. 14.

Illinois Medical Journal, Oak Park

49: 1-88 (Jan.) 1926

Abnormally Located Goiters. F. H. Lahey, Boston.—p. 11.
*Acute Pancreatitis. J. A. Wolfer, Chicago.—p. 14.
*Nonmalignant Obstruction of Pylorus in Aged. J. A. Witherspoon, Nashville, Tenn.—p. 21.
Diagnosis of Asthma. W. J. Quigley, Chicago.—p. 25.
*Production of Urinary Calculi by Devitalization and Infection of Teeth in Dogs with Streptococci from Cases of Nephrolithiasis. E. C. Rosenow, Rochester, Minn.—p. 28.
Responsibility of Medical Profession to Rising Generation. J. L. Edmonson, Chicago.—p. 33.
Sarcoma of Orbit: Case. G. S. Duntley, Macomb.—p. 39.
*Method of Repair of Scalp Defects. E. P. Coleman, Canton.—p. 40.
Bilateral Hematosalpinx with Rupture of One Tube. H. H. Cox and A. H. Baugher, Chicago.—p. 43.
Insanity and Shortness of Human Life Attributed to Ancient and Modern Sensuality. B. Maloy, Chicago.—p. 45.
Outlook in Tuberculosis Problem. H. C. Sweany, Chicago.—p. 61.
Nonmalignant Stricture of Rectum. C. J. Drueck, Chicago.—p. 68.
Fracture of Neck of Humerus. C. A. Finley, Galesburg.—p. 83.
Scrotal Calculi. L. Brannon, Joliet.—p. 84.

Acute Pancreatitis.—Wolfer is of the opinion that the presence of pancreatitis should be suspected in many dyspeptic patients who have pain in the left upper quadrant of the abdomen or who may be suffering from appendicitis or cholecystitis. In many instances the diagnosis of acute pancreatitis can only be made on the operating table, by observing the presence of fat necrosis and by subsequently exploring the pancreas. Wolfer urges that the pancreas should be explored more frequently when an operation is done for cholecystitis or appendicitis or in those patients who have complained of frequent attacks of acute dyspepsia. Drainage of the pancreas or peripancreatic tissue in acute pancreatitis will result in many recoveries.

Nonmalignant Obstruction of Pylorus in Aged.—Witherspoon finds that careful study of elderly people with pyloric obstruction will show that in the majority of cases the obstruction is due to the end-results of duodenal ulcer, and in these cases gastro-enterostomy offers a rapid and permanent relief. Four cases are reported.

Cause of Formation of Urinary Calculi.—The conclusion that primary urinary calculi are often due to streptococci which have elective affinity for the urinary tract and, it would seem, specific power to incite the conditions necessary for their formation, Rosenow thinks seems justified by the results of his experimental study.

Repairing Scalp Defects.—In 1777, a Philadelphia doctor by the name of Vance had a patient who had been scalped by the Indians. His wound had all healed, except the middle portion which was bare bone, and which showed no signs of improving. Vance took a shoemaker's awl and bored numerous holes through the outer table of the skull. He quit boring when a reddish fluid appeared. In his account of the case following operation, he said that "after a time proud flesh appeared to rise in these holes," and he further stated that the wound "skun over slow." Coleman reports two cases which demonstrate that this method is probably the easiest and most satisfactory way of obtaining an epithelial covering when the bare skull is exposed. However, a bone drill, not a shoemaker's awl, was used in these cases.

Indiana State Medical Association Journal, Ft. Wayne

19: 1-50 (Jan.) 1926

Diagnosis of Chronic Middle Ear Suppuration. G. W. Mackenzie, Philadelphia.—p. 1.
Diagnosis and Treatment of Ethmoid Disease. J. D. Heitger, Louisville.—p. 5.
Chronic Nephritis. C. L. Mix, Chicago.—p. 15.
Diagnosis and Treatment of Brain Injuries. A. A. Rang, Washington, D. C.—p. 21.
Editors' and Secretaries' Conference. T. A. Hendricks, Indianapolis.—p. 28.

Iowa State Medical Society Journal, Des Moines

41: 1-52 (Jan.) 1926

Differential Diagnosis of Functional and Organic Diseases of Nervous System. T. B. Throckmorton, Des Moines.—p. 1.
Aspects of Disturbed Thyroid Function. C. R. Harken, Osceola.—p. 9.
Treatment of Compound Comminuted Fractures. W. C. Newell, Ottumwa.—p. 12.
Industrial Surgery. J. F. Chalmers, Fort Madison.—p. 16.
Pick's Disease (Chronic Perihepatitis): Case. J. B. Synhorst, Des Moines.—p. 19.
Medical Economics. R. J. Eischeid, New Albin.—p. 20.
Birth Injuries: Prevention. A. A. Hoffman, Waterloo.—p. 25.
Treatment of Pertussis by Roentgen Ray. J. H. Hess, Chicago.—p. 29.
Clinical Data in Cases of Renal Lithiasis. W. F. Braasch, Rochester, Minn.—p. 33.

Journal of Industrial Hygiene, Baltimore

8: 1-18 (Jan.) 1926

Prevention and Treatment of Stiffness After Fractures. W. T. Johnson, Philadelphia.—p. 1.
Thermal Index of Atmospheric Conditions: Application to Sedentary and Industrial Life. C. P. Yaglou, Pittsburgh.—p. 5.
Treatment of Industrial (Surgical) Accidents to Restore Function and Minimize Subsequent Incapacity. L. E. Hertslet, Transvaal, South Africa.—p. 20.

Journal of Laboratory and Clinical Medicine, St. Louis

11: 209-306 (Dec.) 1925

Resistance of Fowl to Strychnine. W. J. R. Heinekamp, Chicago.—p. 209.
*Blood Sedimentation Test (Fahraeus) in Diagnosis and Prognosis of Disease. M. Bochner and H. Wassing, Paterson, N. J.—p. 214.
*Cod Liver Oil Treated with Magnesium Hydroxide in Treatment of Surgical Tuberculosis. G. B. Rhodes, Cincinnati.—p. 227.
Study of Stability of Some of Constituents of Blood in Tuberculosis. L. R. Jones, Castle Point, N. Y.—p. 231.
*Studies of Colloidal Gold Reaction Using Gold Prepared by Electrical Method. P. J. Manheims and A. Bernhard, New York.—p. 235.
Necropsy on Two Cases of Thymic Death During Surgical Operations. J. W. Fisher, Middletown, Conn.—p. 241.
*Action of Benzylamine on Circulation, Smooth Muscle and Respiration. G. R. Love and J. B. Waddell, Chicago.—p. 248.
Squamous Cell Epithelioma of Stomach: Case. P. P. Vinson and A. C. Broders, Rochester, Minn.—p. 258.
*Schick Test and Scarlet Fever. T. G. Hull, Springfield, Ill.—p. 260.
Hydrogen-Ion Concentration as Factor in Wassermann and Kahn Tests. J. H. Jennett, Kansas City.—p. 261.
Use of Living Vegetable Tissue for Securing Favorable Gaseous Environment for Anaerobic Bacteria. W. R. Carroll, Urbana, Ill., and E. G. Hastings, Madison, Wis.—p. 264.
Antigenic Value of Various Tissue Extracts in Kahn Test. P. L. Kendrick, Lansing, Mich., and H. G. Dunham, Detroit.—p. 267.
*Bactericidal Action of Whole Blood as Determined by Heist-Lacy Method. B. S. Parks, Parkersburg, W. Va.—p. 269.
Value of Acetone Determination in Expired Air in Correlation with Alveolar Carbon Dioxide Tension. P. Roth, Battle Creek, Mich.—p. 275.
Pharmacology of Some Para-Aminobenzoate Compounds. W. J. R. Heinekamp, Chicago.—p. 289.
Standardization of Some New Local Anesthetics by Pittinger Method. G. W. Moxon and O. V. Pawlisch, Chicago.—p. 292.

Significance of Blood Sedimentation Test.—Observations made on clinical cases lead Bochner and Wassing to conclude that the sedimentation test is not only an index of the degree of absorption of catabolic products, but is also an index of the degree of resistance of the host and the virulence of the organism. All other factors being equal, the rate of sedi-

mentation seems to correspond more to the type of organism and the resistance of the patient than to the degree of catabolism and protein absorption. In tuberculosis of the lung the sedimentation test has great value, but it has proved its value in many other conditions, and, therefore, justifies its adoption as an added check to leukocyte count and temperature, subjective and objective findings, and in the diagnosis, course and prognosis of acute and chronic inflammatory conditions.

Cod Liver Oil and Magnesium Hydroxide in Surgical Tuberculosis. — In the treatment of closed tuberculous abscesses, Rhodes made use of an alkalized cod liver oil with good results. Equal quantities of magnesium hydroxide and commercial cod liver oil were boiled together and then centrifugalized. This oil is alkaline to methyl red and alcoholic phenolphthalein. It does not saponify and it remains alkaline. It is nonirritating. Pus is withdrawn from the abscess and an equal amount of the oil is introduced through the needle, which has not been removed.

Studies on Colloidal Gold Reaction.—The colloidal gold reaction, in which the gold was prepared by an electrical method, was studied by Manheims and Bernhard in eighty-six cases. The same type and intensity of reaction are obtained with this gold sol as with chemically prepared gold. It is stated that the presence of blood or blood serum in spinal fluid influences the reduction of the gold sol. The spinal fluid should always be tested for blood by the benzidine test. If blood is found present, a notation to this effect should be made on the report submitted to the clinician, so that he may properly interpret the result. Typical syphilis curves were obtained in 85 per cent of the cases of syphilis of the central nervous system.

Pharmacodynamics of Benzylamine.—Love and Waddell found benzylamine to be a cardiac depressant, acting directly on the heart muscle. Other excised smooth muscle, such as the stomach, intestines, uterus and bladder, is stimulated by small doses and depressed by larger doses. The relative action varies in different animals and different tissues of the same animal. The bladder of all animals examined responded more vigorously to benzylamine than did other smooth muscle examined. The intact stomach and bladder of dogs were stimulated by benzylamine; they were not depressed by doses which cause circulatory failure. The intact intestine and uterus of the dog were not decidedly influenced by any nonlethal dose. The respiration of dogs under light ether anesthesia is slightly stimulated by small doses and depressed by large doses. Failure of respiration is the cause of death from graduated doses. A large dose injected rapidly may cause death by simultaneous failure of the heart and respiration.

Schick Test and Scarlet Fever.—From observations made by Hull it would seem that an attack of scarlet fever tended to destroy the diphtheria antitoxin present in the circulation, causing the Schick test to become positive. Of twenty-three persons giving a previous history of scarlet fever, twenty gave a positive Schick reaction, while of 107 persons with no history of scarlet fever, fifty-six gave a positive reaction.

Bactericidal Action of Whole Blood.—From observation and study of this problem Parks believes that the whole coagulable blood of man may possess the property of destroying or inhibiting the growth of certain pathogenic bacteria. Bacteria which will not grow in the whole blood in vitro but are destroyed by it are probably incapable of producing a bacteremia. Bacteria which will grow in the whole coagulable blood in vitro are probably capable, if they reach the blood stream, of producing a bacteremia. Bacteria which will not grow in the whole coagulable blood of a patient in vitro may still produce a localized infection with the production of symptoms due to toxins and other bacterial products absorbed from such lesions with the production of symptoms. Bacteria from a local infection, capable of growing in the patient's blood in vitro, may not be the cause of the disease, although potentially capable of infecting the blood, until this tissue acquires bactericidal properties by immunologic processes. Autogenous vaccines prepared from bacteria derived from localized infections weeded out by this method are not necessarily specific, although therapeutic results may be secured by nonspecific protein reactions.

Journal of Nervous and Mental Disease, New York

63: 1-104 (Jan.) 1926

*Atypical and Masked Forms of Epidemic Encephalitis (Lethargic). A. V. Neel, Copenhagen, Denmark.—p. 1.
Behavioristic Attitudes Caused by Speech Disorders. M. K. Scripture and J. A. Glassburg, New York.—p. 17.
Spinal Cord Tumors: Six Cases Including Tuberculoma of Dura. M. H. Weinberg, Pittsburgh.—p. 23.
Unilateral Argyll Robertson Pupil, with Presence of Consensual Reaction in Both Eyes. W. C. Menninger, Topeka, Kan.—p. 58.

Atypical Epidemic Encephalitis.—Neel aims to demonstrate, by means of the increased occurrence of certain changes in the spinal fluid, that in addition to the typical and generally recognized cases of epidemic encephalitis there also occur a great many indistinct and atypical cases which, as a rule, are not diagnosed as encephalitis, but are considered as affections of some other kind. He analyzes 127 cases with a multiplicity of diagnoses which he believes were really cases of epidemic encephalitis.

Journal of Radiology, Omaha

6: 475-520 (Dec.) 1925

Clinical and Electrical Aspects of Endothermy in Dermatology. G. C. Andrews, New York.—p. 475.
Valence Changes in Tissue Due to Stimulating Radiotherapy. B. E. McGovern, Colorado Springs, Colo.—p. 480.
*Carcinoma and Sarcoma of Esophagus. C. Jackson, Philadelphia.—p. 485.
Roentgenographic Gastrocolonic Meter. W. J. Manning, Washington, D. C.—p. 500.

Endo-Esophagoscopy for Cancer.—Jackson again urges consideration of endo-esophagoscopy as an effective means of early diagnosis of malignant disease of the esophagus as well as to secure more tangible results from surgical treatment. He says that, when esophagoscopy shall be resorted to promptly on the appearance of certain very vague symptoms, there is ample justification for the belief that the surgeon will cure a considerable percentage of patients.

Kentucky Medical Journal, Bowling Green

29: 1-80 (Jan.) 1926

Prognosis in Cancer of Breast. J. H. Blackburn, Bowling Green.—p. 56.
Some Problems of Country Physicians. V. Kinnaird, Lancaster.—p. 64.
William C. Gorgas of Alabama. S. R. Roberts, Atlanta, Ga.—p. 65.
What Price Health? W. D. Haggard, Nashville, Tenn.—p. 71.
Gastroduodenal Perforations. L. Frank, Louisville.—p. 74.

Medical Journal and Record, New York

123: 1-72 (Jan. 6) 1926

Inherited Physical and Psychic Characteristics in Tuberculous Patients. F. M. Pottenger, Monrovia, Calif.—p. 1.
Prostatic Massage as Prophylactic Measure in Acute Gonococcal Infections of Anterior Urethra. A. L. Wolbarst, New York.—p. 3.
Cutaneous Tests with Suspensions of Treponema Pallidum. H. W. Patton, S. D. Blackford and D. C. Smith, Charlottesville, Va.—p. 4.
Gonorrheal Urethritis in Male. P. S. Pelouze, Philadelphia.—p. 7.
Perforation of Gallbladder with Intraperitoneal Hemorrhage: Case. E. G. Waters, Jersey City, N. J.—p. 11.
Differential Counting with Counting Chamber. A. J. Hinkleman, Oklahoma City.—p. 13.
Sanitary, Medical, Social and Moral Aspects of Birth Control. S. A. Knopf, New York.—p. 16.
Treatment of Stricture of Urethra in Sixteenth Century. D'Arcy Power, London.—p. 21.
What Did Indians Know About Medicines and Healing Treatments? L. G. Herbert, Auburn, N. Y.—p. 22.
Chronic Appendicitis. I. Boas, Berlin, Germany.—p. 25.
Chronic Appendicitis from Surgeon's Viewpoint. H. Haberer, Graz, Austria.—p. 30.
Appendicitis in Hernial Sac. L. F. Watson, Chicago.—p. 34.
Proctostasis. H. Strauss, Berlin, Germany.—p. 36.
Selection of Operative Procedure in Carcinoma of Rectum and Pelvic Colon. G. Robertson, Dunfermline, Scotland.—p. 38.
Suppurative Colitis. D. W. Zweig, Vienna, Austria.—p. 39.
Cholecystography. M. Einhorn, New York.—p. 40.
Differential Diagnosis Between Cancer and Other Gastric Conditions Essentially Associated with Subacidity. S. Basch, New York.—p. 44.
Clinical Applications of Duodenogram. J. Buckstein, New York.—p. 49.
*New Rapid Panchromatic Blood Stain. F. Proescher and A. S. Arkush, Agnew, Calif.—p. 51.
How Duodenal Tube May Be Passed in Highstrung Patients Without Causing Excitement. C. E. Haines, New Rochelle.—p. 51.

Panchromatic Blood Stain.—The stain made by Proescher and Arkush is a mixture of 60 mg., each, of methylene blue, thiazin red (methylene azur), azur II eosin, and eosin, 25 cc. distilled water and 50 cc. acetone. The smear is covered

with a few drops of the staining solution, the excess stain is decanted, and the adhering solution is allowed to remain at least thirty seconds. The film is then washed with tap water. The result obtained with the modified stain is practically the same as with a combined May Grünwald-Giemsa stain. The granules of the neutrophils, eosinophils and basophils are more distinctly stained than with any other method. This is especially noticed in smears from leukemic blood, in which premature granules are excellently brought out. In addition to the more obvious advantages of this method, danger from overstaining has been removed.

Mental Hygiene, Albany, N. Y.

9: 673-896 (Oct.) 1925

Individualism and Organization of Neuropsychiatric Work in Community. A. Meyer, Baltimore.—p. 673.
Tentative Program of Cooperation Between Psychiatrists and Lawyers. S. S. Glueck, Cambridge, Mass.—p. 686.
Pleasure and Deterioration from Narcotic Addiction. L. Kolb, Washington, D. C.—p. 699.
Case for Mentally Retarded. C. S. Berry, Detroit.—p. 725.
Personality Deviations: Their Relation to Home. S. Foster, Boston.—p. 735.
Masculine Side of Occupational Therapy. L. J. Haas, White Plains, N. Y.—p. 743.
Rôle of Conferences with Relatives in Educational Program of State Psychopathic Hospital. F. G. Ebaugh, Denver.—p. 753.
Syphilis in Etiology of Mental Deficiency. N. A. Dayton, Wrentham, Mass.—p. 760.
Résumé of Research Work at Letchworth Village. H. W. Potter, Thiella, N. Y.—p. 772.
Outcome of Mental Diseases in United States. H. M. Pollock, Albany. —p. 783.

New York State Journal of Medicine, New York

26: 43-84 (Jan. 15) 1926

*Treatment of Diabetes Mellitus in Children. R. H. Dennett, New York. —p. 43.
*Chronic Ulcerative Colitis in Childhood. H. F. Helmholz, Rochester, Minn.—p. 46.
Relation of Diet to Eye. A. M. Yudkin, New Haven, Conn.—p. 51.
Conservatism in Treatment of Eclampsia. H. C. Williamson, New York. —p. 55.
*Intravenous Use of Paraldehyde in Eclampsia. W. E. Caldwell, New York.—p. 57.
Thyroid Feeding in Pituitary Disease. F. W. Marlow, Syracuse.—p. 59.
Is Psychotherapy Worth While? J. R. Wiseman, Syracuse.—p. 62.

Treatment of Diabetes Mellitus in Children.—Dennett finds that the diabetic problem is simpler in young children than it is in adults, first, because the child is always under the supervision of its mother or a nurse, and, second, he has to eat the food that is given him. He has less temptation to deviate from the diet because of this supervision. He leads a regular life with less interruptions, has his sleep at stated hours, and his food at more regular intervals. Mental strain is avoided and it is a simple matter to regulate his exercise. Formerly, the high mortality of diabetes in children was discouraging to parents and physicians alike. Now, with the use of insulin, there is definite promise of saving life and of making the dwarfed, emaciated child into a normal, healthy individual, and in certain favorable cases there is the possibility that the pancreas will so regenerate that insulin may be discontinued.

Chronic Ulcerative Colitis in Childhood.—Helmholz reports seven cases of chronic ulcerative colitis occurring in children, making a total of eleven cases seen by him. He feels that the bad prognoses formerly given must be reconsidered. With the establishment of a definite etiology, the main effort must first be to locate and remove possible foci of infection; second, to treat with a specific vaccine, and third, to improve the child's general, as well as specific, resistance by transfusion.

Paraldehyde Intravenously in Eclampsia.—The intravenous use of paraldehyde has been resorted to by Caldwell in the treatment of forty-seven cases of eclampsia. The effect in the majority of cases was startling. The patient relaxed immediately and went into a natural sleep; the respirations became deeper and more regular; the cyanosis cleared up and the blood pressure sometimes dropped from 15 to 20 mm. of mercury and the pulse became full, regular and much slower. The average dose is 2 cc., occasionally as much as 3 cc., injected directly into the median basilic vein. With these small doses the anesthetic action is very short, but it is sufficient to allow the careful examination of the patient and to make such necessary manipulations as phlebotomy, washing out of the stomach and the rectum without disturbance to or excitement of the patient. The anesthetic action is followed by a considerable period of relaxation and allows time to obtain the physiologic action of morphine administered at the same time as the paraldehyde. It has not been used for its curative effects in toxemias of pregnancy, but merely as an aid in controlling the patient while other means for relief of the condition are being instituted.

Oklahoma State Medical Association Journal, Muskogee

19: 1-30 (Jan.) 1926

Cesarean Section. W. A. Fowler, Oklahoma City.—p. 1.
Management of Puerperal Sepsis. W. H. Livermore, Chickasha.—p. 4.
Nitrous Oxide and Oxygen in Obstetrics in Home. J. L. Day, Norman. —p. 5.
Skin Transplantation. C. V. Wedel, Oklahoma City.—p. 7.
Inflammatory Bone Trouble. A. V. Emerson, Tulsa.—p. 11.
Enlarged Program for Maternal Welfare. W. A. Fowler, Oklahoma City.—p. 16.

Philippine Islands Medical Association Journal, Manila

5: 353-390 (Dec.) 1925

*Leprosy as Cause of Death. E. V. Pineda.—p. 360.
*Bacteriologic Findings in Children of Lepers: Nasal Lesions. F. Solis and H. W. Wade.—p. 365.
*Recent Developments in Chemistry of Leprosy Therapy. G. A. Perkins. —p. 369.
Effect on Leprosy of Certain Oils Not in Chaulmoogra Group. B. de Vera.—p. 374.

Cause of Death in Lepers.—Pineda shows that in only comparatively few cases—eighteen deaths in 500 cases of leprosy—does leprosy cause death, but when it does, it is in a more definite way than the simple term of leprosy can convey. This may be brought about in two fairly definite ways: (*a*) leprosy per se with no apparent secondary condition, and (*b*) leprosy giving rise to accidents that are the immediate cause. The first of these modes is illustrated by patients who die in the acute stage of leprosy fever or reaction with its various skin and constitutional manifestations, or of exhaustion or vital depression (leprous cachexia) later in the course of the disease, unaccompanied by any acute manifestations. The second possibility is exemplified by cases in which there is mechanical obstruction of the larynx by leprous granulation tissue and death is brought about through asphyxia. In this type of case the final exciting cause may be the actual granulation tissue, edema, or any comparatively small foreign body that may serve completely to occlude an already narrowed lumen.

Bacteriology of Nasal Lesions of Leprosy.—Solis and Wade examined the nasal mucosa of 250 children for lepra bacilli. In thirty-five, positive findings were made, but in not a single instance were nasal smears positive in the absence of positive skin lesions. The findings strongly indicate that nasal lesions are entirely secondary manifestations in young children, and emphasize anew the fact that the nasal mucosa is not frequently the site of the initial lesion in leprosy. Indeed, they strongly suggest that, at least in young children, the initial lesion does not occur here at all, though there is reason to believe that it may occasionally occur in older persons.

Control of Leprosy.—Treatment, not segregation, in Perkin's opinion, is the only reasonable hope for the control of leprosy as a world problem.

Philippine Journal of Science, Manila

28: 453-630 (Dec.) 1925

Philippine Citrus Fruits. A. H. Wells, F. Agcaoili and M. Y. Orosa. —p. 453.
Pharmacognostical Study of Chenopodium Ambrosioides Linnaeus from Philippines. J. K. Santos.—p. 529.
Structural Characteristics of Double Yolked Eggs and Relation of Membranes of Twin Embryos Resulting from Double Yolked Egg. M. D. Sumulong.—p. 549.
Two New Species of Dragon Flies (Odonata) from Philippine Islands with Remarks on Genus Heliogomphus. F. F. Laidlaw.—p. 559.

New and Rare Philippine Lepidoptera. W. Schultze.—p. 567.
New Species of Hoplionota in Philippines. F. Spaeth.—p. 577.
Brenthids. R. Kleine.—p. 589.
Three New Species of Philippine Galerucini. V. Laboissière.—p. 609.

United States Naval Medical Bulletin, Washington, D. C.

24: 1-174 (Jan.) 1926

Contributions of Medical Corps, U. S. Navy, to American Medicine. E. R. Stitt.—p. 1.
Black Tongue. C. R. Wells.—p. 12.
Development of Venereal Prophylaxis in U. S. Navy. C. A. Setterstrom. —p. 31.
Systematization of Dental Treatment in Navy. W. Rehrauer.—p. 42.
Recruiting. L. B. Marshall.—p. 49.
Lange Colloidal Gold Reaction. R. B. H. Gradwohl.—p. 55.
Acute Injuries of Brain. G. W. Shepard.—p. 61.
Chart for Determination of Erythema Dose in Roentgen-Ray Therapy. E. L. Whitehead.—p. 68.
Analysis of Aviation Crashes. J. D. Benjamin.—p. 72.
Bundle Branch Heart Block: Case. H. E. Hill.—p. 77.
Ear Affections Resulting from Neptune's Party. W. S. Sargent.—p. 82.
Sarcoma of Neck: Case. C. D. Middlestadt.—p. 88.
Acute Intestinal Obstruction: Two Cases. K. E. Lowman.—p. 91.
Conservative Treatment of Buboes. J. M. Barnes.—p. 96.
Unusual Result (Natural Cure) in Fracture About Elbow Joint. R. Hayden.—p. 99.
Carrying Case for Bedside Laboratory Work. R. E. Weaver.—p. 100.
Iritis Due to Sodium Iodide: Case. J. L. Emenhiser.—p. 101.
Age Factor in Major Surgery. C. W. Lane.—p. 102.

FOREIGN

An asterisk (*) before a title indicates that the article is abstracted below. Single case reports and trials of new drugs are usually omitted.

British Medical Journal, London

1: 1-40 (Jan. 2) 1926

*Cancer of Colon. C. A. Pannett.—p. 1.
Save the Women and Children. C. Berkeley.—p. 4.
Identification of Firearms and Projectiles. S. Smith.—p. 8.
*Specific Antitoxin in Treatment of Scarlet Fever. A. G. Robb.—p. 11.
*Salivary Calculus. G. H. Edington.—p. 13.
*Carcinoma of Stomach After Gastrojejunostomy. S. T. Beatson.—p. 15.
Position of Stomach in Healthy British and American Subjects. R. O. Moody.—p. 15.
Occlusion of Receptaculum Chyli: Progressive Emaciation: Death. T. S. Wilson.—p. 16.
Congenital Pachydermatocele: Case. M. Sourasky.—p. 16.
Luminal Sodium in Status Epilepticus: Three Cases. W. J. T. Kimber. —p. 16.
Vaginal Calculus. W. F. Brayner.—p. 17.
Pituitary Extract to Correct Constipation Due to Morphine: Case. E. Obermer.—p. 17.
Nephritis Following Tonsillitis: Case. P. C. Peace.—p. 17.

Cancer of Colon.—Pannett's experience has convinced him that in cases of cancer of the colon surgery is justified. Survival over three years is common, and up to five years not infrequent. This is a disease which is quickly fatal once obstruction has occurred. Many victims are at the time of life when they cannot expect to live for many years. From suitable surgical measures they get immediate relief and prolongation of life in comfort.

Specific Antitoxin in Treatment of Scarlet Fever.—Robb reports very good results from the use of specific streptococcus antitoxin in the treatment of cases of scarlatina. However, good effects are to be looked for only in cases treated early, within two or three days of the onset. In such early cases the attack has been completely aborted, and desquamation and complications prevented, or greatly diminished, so much so that the quarantine time could be reduced about 50 per cent.

Salivary Calculus.—The nine cases reported by Edington illustrate the comparatively high incidence of calculus in the submaxillary apparatus: the high proportion of males; the absence of a constant clinical picture; the obscuration of diagnosis by inflammation, and in the four specimens analyzed the part taken by phosphates.

Carcinoma of Stomach After Gastrojejunostomy.—Beatson's case was one in which death resulted from gastric carcinoma twelve years after a gastrojejunostomy had been done for a reason not ascertainable at the time. The pros and cons of the ulcer-cancer question are discussed.

Journal of Laryngology and Otology, Edinburgh

40: 765-850 (Dec.) 1925

*Toll of Chronic Nasal Focal Sepsis on Body and Mind. P. Watson-Williams.—p. 765.
Large "Pharyngostomes": Complication of Laryngectomy. A. G. Tapia. —p. 781.
*Case of Speech Without a Larynx. H. Burger.—p. 789.
Simple But Effective Artificial Larynx. R. G. Brown.—p. 793.

Effect of Chronic Nasal Focal Sepsis on Mind.—Watson-Williams is of the opinion that the social and economic loss from focal sepsis of nasal origin is immensely greater than that from tuberculosis. The slighter mental disturbances, amounting to alteration in character, disposition and power of concentration, are fruitful causes of unhappiness in the home, of broken hearts, of business losses, and loss of time and energy to the working man; while the more pronounced manifestations are seen in the insane asylums, perchance in the prisoner or the suicide, amounting to a stupendous toll of truly national import; and the pity of it is that the causal infection is largely amenable to successful elimination.

Speech Without a Larynx.—Burger's patient, aged 39, suffered from cancer of one vocal cord. Three and a half years before, laryngofissure had been performed. A rapid recurrence of the disease took place. After preliminary gastrostomy, the larynx was removed. The wall of the pharynx became necrosed, necessitating a plastic operation. A large skin flap from the neck was used for the formation of a new pharynx. A part of the external wound has been covered by a flap taken from the thigh. The success achieved has been complete. After three years, the man is considered cured of his malignant disease, and, moreover, he has a new and fairly good voice, allowing him to carry on his business and to be a normal person in society. The opening of the windpipe is situated in the neck, and there is no communication whatever between the lungs and the pharynx or the mouth. Of the three elements necessary for voice production—the lung with the windpipe as a bellows apparatus, the larynx as the organ producing the sound, and the parts concerned in articulation—the patient possesses only the last. Nevertheless, he can speak distinctly and sonorously. He produces all the speech sounds correctly. He can be heard all over a large room, and delivers speeches at meetings and, as secretary, reads the minutes. He can sing, whisper, whistle, smoke and blow the smoke through the nose. He can blow out a candle at the distance of 12 inches; he can blow his nose. Eating and drinking cause him no trouble, especially drinking. He can retain almost the whole contents of a glass of water without swallowing. After dinner, when the stomach is full, speaking is no trouble to him; it is even easier than at other times. Laryngoscopic examination reveals the fact that the site of the pseudoglottis is at the mouth of the esophagus; further, in quiet respiration this mouth is always wide open. It is not only the esophagus that does duty as an air-chamber: the stomach collaborates.

Lancet, London

1: 1-60 (Jan. 2) 1926

Widening Range of Medicine. L. Dawson.—p. 3.
New Methods, Devices, and Apparatus for Routine and Research Laboratory. A. E. Wright.—p. 4.
*Irradiation of Foodstuffs with Ultraviolet Light. H. M. M. Mackay and H. F. Shaw.—p. 8.
Ultraviolet Irradiation in Activation of Cholesterol and Foods. A. F. Hess and M. Weinstock.—p. 12.
*Ischemic Necrosis of Cardiac Wall. C. F. Coombs and G. Hadfield.—p. 14.
*Roentgenologic Study of Case of Incomplete Intestinal Obstruction. T. I. Candy.—p. 15.
Borocaine: New Local Anesthetic. E. Watson-Williams.—p. 16.
*Lung Splint. R. C. Wingfield.—p. 17.
*Hemolytic Icterus Treated by Splenectomy. L. S. Hannema.—p. 18.
*Hyperglycemia Without Coma: Case. E. B. Leech and G. Thomas. —p. 20.

Irradiation of Foodstuffs with Ultraviolet Light.—The clinical value in the treatment of rachitic children of certain irradiated foodstuffs was investigated by Mackay and Shaw. Three children received irradiated dried milk. In one case the milk formed only part of a mixed diet, which included meat and vegetables. All three children showed roentgenographic evidence of healing between the fifteenth and twenty-second

day after treatment was begun, and in all there was steady progress in calcification. This was at a rate comparable to that usually obtained by direct exposure of the child to the light of the lamp or by administration of cod liver oil by mouth. Moreover, in one child suffering from spasmophilia (infantile tetany) the condition was cured as it would be by direct irradiation. In order to test whether or not the antirachitic property induced by light in the milk would withstand the effects of cooking, two children were given irradiated dried milk, which, after being mixed with water, was simmered over a gas flame, the temperature being kept at the boiling point ten minutes. Both these children had undergone a preliminary control period during which there was no evidence of healing. The roentgenogram showed the first signs of healing on the seventeenth and the nineteenth day, respectively, after the boiled irradiated milk was first given. One child with severe rickets received irradiated, full-cream sweetened condensed milk in place of dried milk. The same rapid calcification was brought about as in the other five cases. The results obtained with irradiated, white wheaten flour were inconclusive and probably negative. Only one inpatient received irradiated cottonseed oil. Healing was apparent on the thirty-ninth day and progress in calcification was slow.

Ischemic Necrosis of Heart Wall.—The symptoms of sudden or rapid occlusion of a larger branch of one of the coronary arteries of the heart by thrombosis or (much less often) by embolism are discussed by Coombs and Hadfield under three heads: (*a*) acute ventricular failure; (*b*) chronic cardiac failure, and (*c*) death before diagnosis. Illustrative cases are cited.

Roentgenoscopy of Intestinal Obstruction.—In the case cited by Candy the terminal 6 inches of the ileum along with its mesentery were thickened and indurated, resembling the appearance and feel of a "leather-bottle stomach." The part was excised, including the thickened mesentery, and ileocecostomy was performed. After the first week the patient began to gain strength. All symptoms gradually disappeared, and she was discharged from hospital "cured."

Lung Splint.—Wingfield controls the movement of the upper half of the thorax by a splint consisting of an aluminium shoulder piece, covered with rubber and lined by a rubber pneumatic bag, which can be inflated to any desired pressure. It exerts an inward pressure in all directions, the power being derived from its own rigidity and by anchoring it to the opposite shoulder and thigh.

Splenectomy in Hemolytic Icterus.—The two cases recorded by Hannema presented similar features and in both, treatment by splenectomy gave favorable results, which have lasted for three years and eighteen months, respectively.

Hyperglycemia Without Coma.—The patient whose case is cited by Leech and Thomas was not comatose and yet had in his blood a concentration of 1.2 per cent of reducing substances (estimated as glucose). Under treatment with diet and insulin, 10 units a day, the blood sugar fell to 0.109 per cent on the seventh day.

Practitioner, London

116: 1-88 (Jan.) 1926

*Some Pitfalls in Surgical Diagnosis. H. F. Waterhouse.—p. 4.
*Value of Modern Laboratory Methods to General Practitioner. F. W. Andrews.—p. 17.
*Value of Examination of Eye in Diagnosis. R. Cruise.—p. 23.
Cystoscopy in Diagnosis. J. Thomson-Walker.—p. 32.
*Blood Pressure in Diagnosis. R. D. Powell.—p. 42.
*Examination of Heart by Electrocardiograph. F. W. Price.—p. 53.
Use of Test Meals and Duodenal Tubes in Diagnosis. F. C. Moore.—p. 61.
*Value of Blood and Urine Examination in Renal Disease. H. Maclean.—p. 67.
Skin Reactions in Asthma, etc. J. Freeman.—p. 73.
Skin Reactions in Diphtheria, Scarlet Fever and Tuberculosis. A. B. Porteous.—p. 79.

Inversion of Testis.—Waterhouse discusses the differential diagnosis of acute osteomyelitis, subphrenic abscess, perforated gastric ulcer, gangrenous appendicitis and inversion of the testis. The latter, Waterhouse says, is hardly ever mentioned in surgical textbooks, yet it has a considerable importance. In this condition the testis is displaced, so that the epididymis is in front, and the body of the testis behind it. The tunica vaginalis lies posterior to the body of the testis, and a hydrocele will, therefore, have the testis in front of it. As regards the frequency of inversion, Waterhouse examined 100 men and found it present in three instances. In 907 postmortem examinations, inversion of the testis was found twelve times. In no case was the inversion bilateral. Under ordinary conditions this displacement is never discovered. Serious danger threatens, however, when a hydrocele is tapped or operated on in the case of inversion of the testis. In Waterhouse's experience, injury to the testis in tapping a hydrocele has been a frequent cause of hematocele of the tunica vaginalis testis, and in only one of these cases had the testis not been inverted. When it is necessary to tap a hydrocele which is not translucent to transmitted light, Waterhouse advises entering the trocar on the outer side of the scrotum, instead of in front. He thinks it probable that inversion of the testis may predispose to the development of a hydrocele, because he has met with the condition in no fewer than twenty-two patients.

Value of Laboratory Methods in Diagnosis.—So valuable have modern laboratory methods proved that the clinician, and perhaps especially the general practitioner, may be tempted to place too much reliance on the pathologist. Andrews insists that the results of laboratory methods, often carried out without actual contact with the patient, must be kept in due perspective as factors only, though often very essential ones, in the full review of the facts concerning any particular case. They can never replace the thorough physical examination of the patient.

Diagnostic Value of Eye Examination.—The diagnostic value of examination of the eye, Cruise shows, lies in its potentiality for confirming a suspicion, or for arousing a suspicion, and in one class of case—hypophysial tumor—in being the sole arbiter for conviction or acquittal of a suspect.

Blood Pressure in Diagnosis.—Powell emphasizes the fact that increased intra-arterial pressure is a symptom, not a disease, although, like other symptoms it may become so predominant as to require direct intervention. It must be regarded in due coordination with all other symptoms of organic unsoundness or ill conditions of life, of which it is often the first danger signal. In many cases its direct effect is compensatory, sustaining function under difficulties, and so it must rarely be isolated for attack in treatment.

Value of Electrocardiography.—Clinical electrocardiography, in Price's opinion, affords the best method of investigation of disordered cardiac mechanism, and, indeed, is frequently essential. It gives evidence of left or right sided preponderance when either exists; it is occasionally of value in the diagnosis of chronic valvular disease; it contributes the most certain sign of transposition of the heart, and is a valuable aid in quinidine therapy. Most important of all, it is the most precise means of investigating the functional efficiency of the heart muscle itself.

Value of Blood and Urine Examination in Kidney Disease.—Estimation of the amount of urine is an extremely simple process which can be carried out by any one in a few minutes. Maclean says that this simple procedure gives more information in general renal conditions than any other tests at present employed. Instead of relying on albuminuria as an index of renal disease, the medical practitioner should get into the way of relying on urea concentration. It is not yet sufficiently recognized that the absence or presence of albuminuria affords but little evidence as to the condition of the kidneys. At least 50 per cent of average persons showing some albuminuria possess quite satisfactory kidneys. Again, the amount of albumin present is of little significance, except in acute disease, so that estimation of this product is usually superfluous. Further, it is very generally accepted that the particular kind of diet taken is not without influence in cases of albuminuria, and that the amount of albumin passed is decreased when protein is eliminated from the diet. This, however, is but another error founded on defective observation; no variation in diet protein produces any effect on the amount of albumin excreted in the urine.

Bulletin de l'Académie de Médecine, Paris

95: 1-26 (Jan. 5) 1926

*Recovery After Removal of Gastric Cancer. G. Hayem.—p. 15.
*Marie-Bamberger Disease in a Lioness. V. Ball and C. Lombard.—p. 16.
*Blood Transfusion in Septic Peritonitis. Poenaru Caplesco.—p. 17.
*Uremia and Oxalemia. J. Khouri.—p. 20.
*Tuberculosis in Bakeries. J. Parisot and G. Richard.—p. 23.

Case of Recovery from Gastric Cancer.—Hayem's patient had had extensive resection of the stomach done for a malignant epithelioma of the tubuloracemose type over twenty-seven years before. He died recently from intercurrent "congestion of the lung" at the age of 68. Hayem considers the case as one of unquestionable recovery from malignant disease.

Hypertrophic Pneumic Osteo-Arthropathy in a Lioness.—Ball and Lombard report a case of Marie-Bamberger disease in a 10 years old lioness. The pulmonary lesions and general condition had grown steadily worse since the animal had last borne young. At necropsy all the bones appeared involved, especially those of the limbs and pelvis. The lungs presented lesions of chronic tuberculosis with bronchiectasis; there was also fatty degeneration of the liver.

Transfusion in Septic Peritonitis.—Caplesco applied transfusions of blood in eight cases of septic peritonitis consecutive to appendicitis. He emphasizes that while this complication, treated by other methods, ended always fatally, all his patients recovered after one, two or three transfusions of 100 or 200 cc. of blood. He believes that excellent results may be obtained from transfusion in acute septic infections and infectious diseases.

Uremia and Oxalemia.—In ten of Khouri's cases of uremia the amount of oxalic acid in the blood was markedly increased; in one case to 0.6 Gm. per liter. In one patient under observation for a year, an improvement corresponded always to a considerable reduction of the oxalic acid content of the blood, while the amount of urea did not change. Khouri describes his test which is sufficiently accurate for evaluation of small quantities of oxalic acid in the blood.

Tuberculosis in Workers in Bakeries.—Summarized in Paris Letter, Jan. 30, p. 362.

Bulletins de la Société Médicale des Hôpitaux, Paris

49: 1577-1692 (Dec. 18) 1925

*Intestinal Lipase and Fats. L. Binet.—p. 1578.
*Vaccine Treatment of Chancroid. Laederich and Weill-Spire.—p. 1581.
*Simultaneous Bilateral Pneumothorax. E. Rist et al.—p. 1583.
*Vaccination Against Tuberculosis. B. Weill-Hallé and R. Turpin.—p. 1589.
Bone Lesions in Recklinghausen's Disease. Babonneix et al.—p. 1601.
Infarction of the Auricle. A. Clerc and R. Lévy.—p. 1603.
*Recklinghausen's Bone Disease. G. Guillain et al.—p. 1607.
*Neurosyphilis with Xanthochromia. G. Guillain et al.—p. 1613.
*Vaccine Therapy in Chancroid. Hudelo et al.—p. 1619.
*Tolerance for Epinephrine. A. Ricaldoni.—p. 1627.
Therapeutic Bilateral Pneumothorax. Denéchau and Amsler.—p. 1629.
Phrenicotomy with Pneumothorax in Treatment of Tuberculosis. W. Jullien.—p. 1635.
Resorption of Injected Serums in the Undernourished. L. Ribadeau-Dumas and Tisserand.—p. 1637.
Septicemia from Anaerobic Bacilli. Vaucher et al.—p. 1641. N. Sp.
Pancreas Function Tests with Duodenal Tube. Chiray et al.—p. 1646.
Pernicious Anemia in a Syphilitic. P. Merklen et al.—p. 1665.

Digestion and Absorption of Fats in the Intestine.—Not only the pancreatic lipase but also the intestinal lipase induces digestion of fats, in the presence of bile. Binet's experiments were made on depancreatized dogs fed with butter. Three or four hours later the lacteals were found full of chyle. This testifies to the action of the intestinal lipase allowing absorption of the ingested fats.

Vaccine Therapy of Chancroid with Nicolle's Vaccine.—Laederich and Weill-Spire treated with Nicolle's Ducrey bacillus vaccine nine patients with a suppurating bubo and one with chancroid of the arm from autoinoculation. The latter patient recovered in seven days under three intravenous injections of the vaccine, each of 1 cc.; while the usual treatment continued for a month before this had failed. Remarkable results were obtained in the other patients. Recurrence of the bubo was noted in one case, eleven days after the last injection. The series of injections was then repeated. In twelve days the bubo had disappeared, and the chancroid healed permanently. In another case of recurrence, the second series of injections was followed by complete recovery in five days.

Pneumothorax Induced Simultaneously in Both Lungs.—Summarized in Paris Letter, January 30, p. 362.

Vaccination of Infants Against Tuberculosis.—Weill-Hallé and Turpin inoculated 298 infants with the Calmette-Guérin BCG vaccine (described editorially in THE JOURNAL, Sept. 12, 1925, p. 826). A dose of 2 cc. of an emulsion containing 0.01 Gm. of a culture of the living bacilli, grown with bile, was given with a teaspoon of milk, half an hour before feeding. The first dose was given the fourth or fifth day after birth, and two more at one day intervals. Seventeen of the vaccinated remained with the tuberculous mothers. All the infants have gained normally in weight. One of them is now over 3 years old; it weighs about 16 Kg. and is perfectly healthy. Six infants remained in contact with their tuberculous father. Two of them, now over 2 years old, are in excellent health and show a negative tuberculin test. Twenty-four infants belonging to healthy parents were examined three years after the vaccination. The children have grown normally; the skin test is negative in 80 per cent of them. The mortality from nontuberculous diseases was from 5.1 to 6.04 per cent; from tuberculosis, 0.39 to 0.5 per cent. No by-effects were noted with the vaccination. The duration of the immunity is not yet established. (Compare with recent editorial, p. 626.)

Case of Generalized Recklinghausen's Bone Disease.—Guillain, Bertrand and Garcin call attention to two symptoms manifest in their case of osteitis fibrosa osteoplastica: The appearance of the bone swelling was always accompanied by an extremely severe and piercing pain, which disappeared as soon as the bone tumor had fully developed. The other symptom was the higher local temperature in the affected area. The histologic findings differentiate the disease from a myeloplax sarcoma.

Neurosyphilis with Xanthochromia of the Cerebrospinal Fluid.—Guillain, Lechelle and Péron describe a case of syphilis in which the cauda equina syndrome coexisted with a yellowish discoloration of the cerebrospinal fluid and a large albumin content. This xanthochromia reveals a special form of neurosyphilis, a meningomyelitis with gummatous radiculitis of the cauda equina. The yellow tint of the cerebrospinal fluid may aid in differential diagnosis from a low Pott's disease, or tumor of the cauda.

Vaccine Therapy of Chancroid.—Summarized in Paris Letter, Jan. 30, 1926, p. 361.

Tolerance of the Heart and Vessels for Epinephrine.—Ricaldoni examined a patient with asthma who had been in the habit of injecting himself with epinephrine for thirteen years (0.006 Gm. daily for ten years, then from 0.009 to 0.012 Gm. daily for three years). This epinephrine addiction did not seem to have induced marked changes in the cardiovascular apparatus. The man was thin and pale, but his earning capacity was unimpaired and there was no hypertension.

Journal de Radiologie et d'Electrologie, Paris

9: 433-496 (Oct.) 1925

*Roentgen-Ray Diagnosis of Fibroma. L. Ferré.—p. 433.
Congenital Torsion of the Intestine. R. Gilbert.—p. 443.
Tumor from a Foreign Body in the Appendix. J. Villette.—p. 445.

Roentgen Ray in Diagnosis of Fibroma.—Ferré uses intrauterine injection of iodized oil for roentgen-ray diagnosis of uterine fibromas. The roentgenogram is taken immediately after the injection of 4 cc. of iodized oil, the speculum still in the vagina. He reports six observations in which this method revealed the size of the uterine cavity, the outline of the fibroma, its nature and localization. It indicated also the condition of the adnexa and the patency of the fallopian tubes, possibly even the graafian follicle. The diagnosis of the fibroma had been clinically established in all the patients. The injection seemed to be harmless, and none complained of pain from it. Of course pregnancy, heart disease, acute metritis, and salpingitis, as well as uterine hemorrhage are contraindications for the method.

Médecine, Paris

7: 85-160 (Nov.) 1925

Syphilis, Venereal and Skin Diseases in 1924 and 1925. H. Gougerot. —p. 85.
Hydroa Vacciniforme and Sunburn. L. Brocq.—p. 104.
*Treatment of Acne. R. Sabouraud.—p. 110.
*Treatment of Lichen. L. Spillmann and J. Watrin.—p. 115.
*Treatment of Urticaria. Lortat-Jacob.—p. 116.
Nature of Malignant Granulomatosis. Louste—p. 121.
Juxta-Articular Nodules. R. Bernard.—p. 123.
*Psoriasis. Lévy-Franckel and E. Juster.—p. 128.
Epilepsy of Syphilitic Origin. Jeanselme.—p. 130.
*Neurotropic Virus of Syphilis. J. A. Sicard.—p. 141.
Test Treatment of Syphilis. J. Nicolas and M. Pillon.—p. 145.
The Various Manifestations of Congenital Syphilis. G. Milian.—p. 147.
Treatment of Mixed Chancre. Lévy-Bing and R. Barthélemy.—p. 151.
*Migraine and Scotoma. M. Pinard.—p. 152.
*Early Syphilitic Aortitis. H. Bonnin.—p. 156.

Treatment of Acne.—Sabouraud applies the electric spark or roentgenotherapy in polymorphous acne persisting still after a three weeks' course of sulphur treatment. He prefers the roentgen ray to the high frequency spark, as it is not painful and its action is more constant. Good results were noted after a total of four exposures, each of 400 (Solomon ionometer) units, at eight day intervals. He emphasizes that recurrences may be expected as long as the causal factor of the acne, namely the seborrhea, is not cured. As soon as the acne is healed, he orders a sulphur mixture rubbed vigorously into the skin once a day or on alternate days for thirty or forty seconds at a time. After fifteen or eighteen months of sulphur treatment the seborrhea gradually subsides. There seem to be no cases of incurable acne under this treatment as he manages it.

Roentgenotherapy of Lichen Planus.—Spillmann and Watrin apply the technic Bordier uses for anterior poliomyelitis. The spine from the first dorsal to the fifth lumbar vertebra is divided in five fields, and a dose of 3 or 4 H. units is applied to each field, perpendicular to the laminae, in order to influence directly the spinal cord. A single exposure induced retrogression of the papules and relief from the itching in from ten to fifteen days. Soon all morbid signs disappeared. On the other hand, Gouin's ten patients with lichen completely recovered after 5 H. units of nonfiltered rays had been applied to the fourth and fifth dorsal vertebrae. The irradiation was superficial, acting probably only on the sympathetic system.

Damage from Cathartics in Urticaria.—Lortat-Jacob warns against any cathartics or laxatives, especially in small and repeated doses, because this favors the absorption of toxic substances and aggravates the urticaria. He suggests lavage of the intestine with physiologic saline solution for infants, and charcoal by mouth for older children and adults. A teaspoonful of granulated charcoal is given three or four times daily, for ten days. In adults it may be combined with enemas of physiologic solution. The usual methods of desensitization are employed at the same time. He says that his long experience has proved this treatment to be effectual.

Hereditary and Familial Psoriasis.—Lévy-Franckel and Juster found hereditary and familial psoriasis in 10.6 per cent of 160 cases observed. The psoriasis was hereditary in ten instances, familial in ten; both hereditary and familial in three. There was no coincidence of asthma or eczema with the psoriasis, while these affections were frequent in the preceding two or three generations. Abortions occur frequently in women with psoriasis from childhood and a negative Wassermann test, but with a history of syphilis in the family. This suggests that hereditary and familial transmission of psoriasis is due to syphilis, which may create a special skin, gland or humoral predisposition, a syphilitic dystrophia. That the action of syphilis is dystrophic and not microbian is seemingly proved by the fact that cases of conjugal psoriasis are almost unknown.

Neurotropic Virus of Syphilis.—Sicard reports two observations which he considers as an argument against the theory of a syphilitic neurotropic virus. In both cases the persons from whom the infection had been derived did not present any form of neurosyphilis, while the contaminated subjects developed general paresis.

Ophthalmic Migraine and Scotoma.—Pinard relates that a course of treatment as for syphilis may cure the migraine and its attendant eye symptoms, thus revealing a latent syphilitic arteritis as responsible for the affection.

Early Aortitis in Syphilis.—Bonnin refers to Etienne's cases in which aortitis developed nine, eight and even three months after the chancre. Rapid development of the lesions, as well as early appearance of heart insufficiency or cachexia are among the characteristic signs of early syphilitic aortitis. It obviously represents a malignant form of syphilis.

Presse Médicale, Paris

34: 17-32 (Jan. 6) 1926

*The Pneumogastric and Gastric Ulcer. M. Loeper and G. Marchal.—p. 17.
Diuretic Action of Pyrola. H. Busquet.—p. 18.
Technic for Cholecystectomy. L. Desgouttes and A. Ricard.—p. 19.
Fracture of the Humerus in Children. A. Tailhefer.—p. 21.

Rôle of Vagus Nerve in Gastric Ulcer.—Loeper and Marchal emphasize that hypertonia of the parasympathetic system is not the causal factor of a gastric ulcer, but is a secondary phenomenon. Subsequently this hypertonia affects the gastric functioning, thus being responsible for pseudotabetic gastric crises, enhanced acidity of the gastric juice and decreased leukopedesis. Obviously the defensive powers of the gastric mucosa are reduced, and healing of the ulcer impeded. Severing the vagus or its destruction in the course of an extensive ulcer induces inverse phenomena, decrease of acidity and hyperleukocytosis. Therefore atropine appears to be indicated in treatment of gastric ulcer on account of its inhibiting action on the nerve tonus. It reduces gastric motility and secretion, and increases leukopedesis. The latter is more pronounced with atropine given by mouth than subcutaneously. Atropine accomplishes physiologically what is realized surgically by severing the vagus.

Revue de Chirurgie, Paris

63: 641-708, 1925

*Treatment of Jacksonian Epilepsy. R. Leriche and Wertheimer.—p. 641.
The Vertebral Column from the Anatomic and Physiologic Standpoints. Gallois and Japiot.—p. 688.

Importance of Intracranial Tension for Jacksonian Epilepsy.—Leriche and Wertheimer's experience includes, among others, thirty cases of jacksonian epilepsy consecutive to war skull wounds. It teaches that neither foreign bodies in the brain, nor lesions of the adjacent meninges, are responsible for the epileptic spasms. The share of infection is also insignificant. The occurrence and the frequency of the convulsions are in connection with changes of tension of the cerebrospinal fluid. Spontaneous or experimental spasms may be induced by hypotension as well as by exaggerated tension. Their experience shows further that withdrawing an excess of the fluid and injections of hypotonic or hypertonic solutions, as the case may be, should often be preferred to an operation. In their cases with hypotension, from 250 to 500 cc. of physiologic solution was given subcutaneously; or distilled water was used, 150 cc. subcutaneously, or from 20 to 40 cc. intravenously. In hypertension, from 20 to 40 cc. of a 30 per cent solution of glucose was administered by the vein. The dose as well as the number and mode of the injections vary according to the case. The treatment was sometimes continued intermittently for months. Eighteen of the patients have been under prolonged observation, some for up to ten years. Two have died; the others are all engaged regularly in active occupations.

Revue de Médecine, Paris

42: 457-584, 1925

*Action of Spleen Lesions on the Liver. N. Fiessinger et al.—p. 457.
*Diathermy in Treatment of Glycosuria. H. Bordier.—p. 463.
Different Clinical Pictures from Destruction of Blood Corpuscles in Malaria. Trabaud.—p. 470.

Liver Lesions Secondary to Autolysis of the Spleen.—Fiessinger, Ravina and Jovin's experiments were made on guineapigs and rabbits in which the spleen had been drawn out and crushed with forceps, the pedicle left intact. The lesions of the liver cells were marked in fifteen to forty-five days. The

influence of the autolysis in the spleen on the hepatic cells explains the occurrence of liver disease with enlargement of the spleen from congestion or inflammation. The products of the autolysis, carried to the liver, cause first parenchymatous lesions and then cicatricial changes and cirrhosis.

Influence of Diathermy in Checking Glycosuria.—Bordier summarizes the results of Ghilarducci's research on guinea-pigs, given phlorhizin, or fed with sugar, or pancreatectomized. Diathermy was then applied to the animals and none of them developed glycosuria, while glycosuria was pronounced in the controls. The influence of diathermy was also evident in dogs with induced pancreatic diabetes. While insulin tends to supplement the products secreted by Langerhans' islands, the diathermy current stimulates the internal secretion of the islands, thus accomplishing the same purpose. Unvoli has confirmed in the clinic the insulin-like action of diathermy in diabetics, and Bordier reports the case of a young man with 5.9 per cent glucose in the urine. It dropped to zero in the course of six diathermy exposures, and the cure has been complete to date.

Schweizerische medizinische Wochenschrift, Basel

56: 25-48 (Jan. 16) 1926

*Experimental Herpes from Vaccines. O. Naegeli.—p. 25.
Multiple Sclerosis. R. Bing and Reese.—p. 30.
*Water Metabolism and Kidney Function. A. Gigon.—p. 34.
Emanations from Sediment of Radioactive Wells. L. Blumer.—p. 37.

Experimental Herpes from Vaccines.—Naegeli produced febrile herpes in a number of patients by injections of vaccines, especially those obtained from meningococci and colon bacilli. Loewenthal was able to transmit the herpes in the majority of cases to rabbits. Naegeli is inclined to support Doerr's hypothesis of a new formation of the (not living) virus in the organism, which is analogous to one theory in regard to the bacteriophage.

Water Metabolism and Kidney Function.—Gigon determined directly the water content of the blood. Comparatively slight changes of it—for instance an increase of 2 per cent—may mean in reality addition of a little over 10 cc. of water to 100 cc. of blood. Ingestion of water causes an increase of the water content and hydrogen ion concentration, slight increase of the glucose, and decrease of total carbon and nitrogen. Injection of a kidney extract prepared similarly to insulin induces similar, although slighter changes. He observed several times a favorable action of kidney substance and extracts from endocrine glands on albuminuria. There are constant relations between the total carbon and the water content of the blood. The percentage of nitrogen varies independently.

Chirurgia degli Organi di Movimento, Bologna

9: 213-328, 1925

*Coxa Plana. M. Camurati.—p. 213.
Deutschländer's Disease of Metatarsal Bone. G. Peremans.—p. 229.
Branching Lipoma of Tendon Sheath. Brandão Filho.—p. 235.
Madelung's Deformity. A. Merlini.—p. 245.
*Trauma of Internal Condyle. S. Lussana.—p. 269.
Ischiopubic Osteochondritis. G. Valtancetti.—p. 281.
Operative Cure of Inveterate Fracture of the Patella. G. Pieri.—p. 288.
*Osgood-Schlatter's Disease. F. Delitala.—p. 293.
Etiology of Coxa Plana. F. Delitala.—p. 309.
Recurring Forward Dislocation of the Knee Joint. S. Marconi.—p. 320.

Final Outcome of Coxa Plana.—Camurati gives the history of three cases with an interval of eleven to thirteen years between the first and last roentgenograms. The gait is now normal in one case, slightly irregular in the others. The neck of the femur is shortened and in the varus position in all. The epiphysis is flattened in all, and the acetabulum is shallow in two. One patient complains of slight pain when very tired.

Injury of the Knee.—Lussana warns that it may be difficult to distinguish between a fracture from detachment of the inner condyle and pathologic posttraumatic ossification. The latter is slower in developing and is progressive, and requires treatment by movements and exercise, not surgery.

Osgood-Schlatter's Disease.—Delitala states that congenital syphilis was beyond question in a case described in which the lesion in the tubercle of the tibia was bilateral. After failure of treatment by immobilization, clinically normal conditions were restored by an operation for fixation of the epiphysis by means of a bone peg from the tibia below. This allows perfect functioning of the muscles and favors bone repair.

Pediatria, Naples

34: 1-56 (Jan. 1) 1926

Tuberculous Peritonitis. C. Giaume.—p. 1.
*Postscarlatinal Nephritis. A. Nastasi.—p. 22.
Vaccine Prevention of Measles. A. Emmanuele.—p. 30.
*Bronchial Moniliasis. I. Nasso.—p. 37.
Hydrocephalus and Umbilical Hemorrhage. F. Lo Presti-Seminerio.—p. 43.

Postscarlatinal Nephritis.—Nastasi obtained from the urine of fourteen of twenty-three children with postscarlatinal nephritis cultures with all the characters of Caronia's alleged scarlet fever germs. No streptococci were found.

Bronchial Moniliasis.—Nasso's patient was a girl convalescent from malaria. She had symptoms of tracheobronchitis, with blood stained sputum, from which he cultivated *Monilia pinoyi*. The local symptoms and the anemia (1.5 millions erythrocytes, 45 per cent hemoglobin) were ameliorated by iodides and arsenic.

Policlinico, Rome

33: 1-40 (Jan. 4) 1926

Nature of Syphilis. L. Philippson.—p. 3.
*Vitamins and Tuberculin Allergy. P. Galli.—p. 13.
Spontaneous Pyopneumothorax. A. Stainer.—p. 16.
Determination of Acetone with Hydroxylamine. E. Pittarelli.—p. 18.

33: 41-76 (Jan. 11) 1926

Syndromes from Basal Ganglions. R. Monteleone.—p. 41.
Purulent Infections of the Kidney. R. Broglio.—p. 50.
Kidney Function Tests in Surgery. C. Ravasini.—p. 53.
The Meltzer-Lyon Test. A. Trossarelli.—p. 55.

Vitamins and Tuberculin Allergy.—Galli observed after administration of vitamins a strengthening or reappearance of the tuberculin reaction in children in the stage of anergy or very weak allergy. He points to the practical application of these findings.

Riforma Medica, Naples

42: 1-24 (Jan. 4) 1926

Function Tests of Respiratory Apparatus. G. Boeri.—p. 1.
Bilharziasis of Bladder in Somalia. C. Veneroni.—p. 9.
Colloidal Benzoin Test in Serum. L. Gaidano.—p. 10.
*Termination of Motor Nerves in the Larynx. V. Tanturri.—p. 12.
Tube Diagnosis of Bile Duct Through the Ampulla of Vater. S. Catellani.—p. 21.
Determination of Acetone with Hydroxylamine. E. Pittarelli.—p. 22.

Termination of Motor Nerves in the Larynx.—Tanturri found no morphologic indications of a double motor innervation of the muscles of the larynx.

Revista de la Soc. de Med. Interna, Buenos Aires

1: 463-500 (Sept.) 1925

Case of Sclerosis of Pulmonary Artery. P. Escudero.—p. 463.
Typhoid Orchitis with Epididymitis. M. R. Castex et al.—p. 471.
Early Diagnosis of Inflammation of Pulmonary Artery. F. C. Arrillaga.—p. 478.
*Insulin in Hyperthyroid Conditions. M. R. Castex et al.—p. 485.
Breast Cancer with Metastasis in Spine. Castex et al.—p. 489.
Protracted Fever from Hyperthyroidism. F. Puchulu.—p. 495.

Insulin in Treatment of Hyperthyroid Conditions.—Castex, Schteingart and Beretervide gave 20 insulin units daily for twenty days or for ten days in eighteen patients presenting exophthalmic goiter, simple goiter with hyperthyroid symptoms in the menopause, or with extremely high basal metabolism, or with thyroid insufficiency. The basal metabolism was augmented by it in three and depressed in three. It was restored to normal in only one instance (menopause case). The action of insulin in hyperthyroidism thus seems to be variable and inconstant.

Santa Fé Médico

1: 1-94 (Oct.) 1925

*The Blood in Congenital Syphilis. P. Rueda.—p. 3.
Treatment of Obstipation. J. B. Abalos.—p. 33.
The Blood as a Tissue. T. Cerruti.—p. 43.
*Obesity. E. S. Weiler.—p. 51.
Perinephritic Phlegmon. R. Landivar.—p. 64.
Sclerosis of Pleura and Lung in Children. E. Blanco.—p. 80.

The Blood in Congenital Syphilis.—Rueda's tabulated details from 100 young children with congenital syphilis record that the coagulation time was normal in only about 10 per cent and the erythrocyte count in 34 per cent, the leukocytes in about 50 per cent. In the other cases there was marked leukocytosis, the mononuclears predominating. This mononucleosis may be at first the only clue to the congenital disease.

Treatment of Obesity.—Weiler believes that too much carbohydrate in the diet leads to overaccumulation, and fat is formed in excess as a defensive reaction. Treatment should include restriction of intake of carbohydrates and, possibly, insulin to promote the utilization of carbohydrates already on hand. The diet should be somewhat like that for diabetes, with little or no carbohydrate, but no restrictions as to fats and fluids. In seventeen cases described, simple avoidance of carbohydrates brought the weight down from 94 to 88 Kg. in four months in one man, and from over 104 to 95 Kg. in six weeks in another. One woman of 59 lost 15 kg. in a few months. The one patient given insulin had lost 19 Kg. under the restricted diet alone, and then lost 4 Kg. more when insulin was injected to a total of 400 units in two weeks. Provision should be made for supply of vitamins in all cases.

Semana Médica, Buenos Aires

2: 1081-1136 (Oct. 29) 1925

Intravenous Medication. G. Aráoz Alfaro and L. Ymaz.—p. 1081.
Congenital Diaphragmatic Hernia in the New-Born. U. Fernández.—p. 1083.
*Peripheral Pseudotabes in Children. J. C. Navarro.—p. 1090.
Destructive Syphilis of Nose in Girl Aged 8. E. Berctervide et al.—p. 1093.
Alcoholism in Children. J. M. Obarrio.—p. 1096.
*Cancer in Lacrimal Sac. F. Strada and A. Urrets Zavalia.—p. 1100.
Trauma of the Chest in Relation to Tuberculosis. A. A. Masciotra.—p. 1108.
Report on Public Health and Medical Education. J. Iribarne.—p. 1111.
The Triple Record. J. Mendióroz.—p. 1118.

Pseudotabetic Polyneuritis in Children.—Navarro encountered in 1924 two cases of paresis, affecting all the body except the head, in girls, aged 6 and 11. There were no symptoms suggesting intracranial pressure, the clinical picture resembling that of locomotor ataxia. The onset was insidious and complete recovery followed in less than two months, without any medication. There were no acute symptoms in the younger child at any time; in the other case there was moderate fever and also a history of a severe fright just before the appearance of the ataxia. The children were unable to walk or even to feed themselves for a time. There was no pain or tenderness. The etiology is obscure.

Carcinoma of the Lacrimal Sac.—Epiphora and pain had been the principal symptoms of the malignant disease in the man, aged 57. Radiotherapy was applied after extirpation of the tumor but the man died in ten months, presumably from metastasis, without return of the tumor in its primary site. The case is compared with others on record, a total of twenty-five.

Deutsche medizinische Wochenschrift, Berlin

52: 49-92 (Jan. 8) 1926

Early Treatment of Syphilis. K. Zieler.—p. 49.
*Estrus-Inducing Hormone. E. Laqueur et al.—p. 52. C'cn.
*Treatment of Renal Calculus. H. Kalk and W. Schöndube.—p. 55.
*Treatment of Diphtheria. H. Heckscher.—p. 58.
*Cutting with Electric Spark. G. Döderlein.—p. 59.
Abortion. W. Hannes.—p. 60.
Meinicke Microtest. I. Franz.—p. 63.
Examination of Roentgen Pictures in Green Light. K. Henius.—p. 64.
*Insulin-Sugar Treatment of Liver Insufficiency. H. Jacoby.—p. 64.
Start of General Anesthesia with Cologne Water. E. Gohrbandt.—p. 65.
Hemorrhage from Retained Fragment of Placenta. W. Mandel.—p. 66.
Therapeutic Action of Thymus Extract. O. Blum.—p. 67.
*Food Value of Yeast. C. S. Engel.—p. 67.
Chemotherapy. R. Schnitzer.—p. 69.
Wassermann Test in Midwives. G. Loewenstein.—p. 71.
Physicians' Old Age Insurance. Landsberg.—p. 72.
Psychology and Philosophy Abroad. T. Ziehen.—p. 73. C'td.

Hormone Inducing Estrus.—Laqueur, Hart, de Jongh and Wijsenbeek confirm Zondek and Brahn's discovery of a water soluble hormone of the estrual cycle. They suggest the name "menformon" for it, but want it reserved exclusively for such preparations which contain in 1 mg. of substance at least ten doses sufficient to provoke the estrual cycle in a castrated mouse. The pure preparations contained too little substance to be analyzed chemically. They believe that the hormone probably contains no protein nitrogen, phosphorus or cholesterol.

Treatment of Nephrolithiasis.—Kalk and Schöndube inject pituitary extracts in nephrolithiasis to promote the spontaneous elimination of stones as long as they are small. Methenamine should precede this treatment in infected cases. A roentgen examination should exclude too large stones. The injection is followed within fifteen to thirty minutes by the colic, which they mitigate by morphine.

Treatment of Diphtheria.—Heckscher has treated 4,819 patients with diphtheria of the nose and throat. Antitoxin treatment was used in about two thirds of them and especially large doses (up to 200,000 units, given partly intramuscularly, partly intravenously, within two, rarely four days), were used in the 10 per cent grave cases. The total mortality was 2 per cent, but of this 0.8 per cent was attributed to complicating diseases, such as pneumonia or syphilis or lack of time for the effects of the treatment, since some of these patients died within twenty-four hours after admission. Of the remaining fifty-seven deaths (1.2 per cent) only one was due to a collapse after injection of the antitoxin, and the treatment may have contributed to the fatal circulatory failure which developed in two other patients in the third week.

Cutting with Electric Spark.—Döderlein corrects some of the optimistic misstatements circulated in the daily press on the results at the clinic he is associated with and the outlook. He points out that the method is quite old (de Forest's needle). The advantage of a bloodless and aseptic operation is offset by the grave damage done to the surrounding tissues, with no possibility to estimate in advance how deep the injury will go. The healing is much slower than after regular interventions. The method is useful only in treatment of cancer, approximately where the hot iron would formerly have been indicated.

Insulin-Sugar Treatment of Liver Insufficiency.—Jacoby confirms the beneficial influence of injection of insulin and sugar in insufficiency of the liver—especially in grave jaundice.

Food Value of Yeast.—Engel heats dry yeast in oil to 165-180 C. The oil prevents the intracellular water from escaping. The steam bursts the cellulose membrane, which otherwise makes yeast indigestible for man.

Medizinische Klinik, Berlin

22: 43-80 (Jan. 8) 1926

*Puncture of the Brain. E. Neisser.—p. 43.
*Constitutional Asthma. R. Schmidt.—p. 46. C'cn.
Psychanalysis and the Practitioner. R. Traugott.—p. 49.
Symposium on Surgery of Cancer of the Rectum. C. Ewald and others.—p. 52.
*Temporary Relaxation of the Diaphragm. W. Altschul.—p. 54.
*Insulin Treatment of Dystrophic Infants. Tezner and Ebel.—p. 56.
*Atropine Stomach Test. J. Stranz.—p. 59.
*Bismuth Inunction in Rabbits' Syphilis. G. Giemsa.—p. 60.
Psychopathy, Exophthalmic Goiter and Trauma. Schnizer.—p. 61.
Aschoff's "Pathology." S. Gräff.—p. 66.

Puncture of the Brain.—Neisser reviews the indications for puncture of the brain, which he devised, with K. Pollack, in 1904. Subdural hematomas and other intracranial hemorrhages, cysts of the cerebellum, and internal hydrocephalus may be favorably influenced and tumors recognized.

Constitutional Asthma.—Schmidt suggests to accept this name for the usual "bronchial asthma." The dominant importance of the individual constitution has to be admitted even by the partisans of the anaphylactic theory: The mere fact that only a small percentage of the subjects exposed to the same injurious agent react to it with asthma, proves this. Abnormal conditions in the respiratory apparatus (shape of chest, swelling or polyposis of the mucous membrane of the nose) are found almost regularly. Eosinophilia is another constitutional character. The asthma patient suffers from a sometimes almost universal hyperirritability (erethism). Psychic—frequently hysteric—changes, gastro-intestinal dis-

turbances, flatulence, hives, eczema, and paroxysmal tachycardia are indications of it. He is skeptical in regard to the danger of producing anaphylaxis in man. He warns against overestimation of the diagnostic import of the results of intracutaneous tests. The skin may have its inborn or acquired peculiarities of reaction which are usually not selective, but rather directed against whole groups. "A fool can ask more questions than a hundred wise men can answer. The skin is only one wise man, and we should not compete with the fool." He believes that the general (nonspecific) sensitization has been underestimated. It may be due to infectious foci (tuberculosis, syphilis) nicotine poisoning, alcoholism and sexual excesses. A specific or nonspecific local sensitization may be due to influenza, dust, etc., but all these causes act only if endogenous readiness is encountered. He never found asthma with the typical asthenic, low-blood pressure diabetes in the young. A tendency to gout and gallstones is a common complication. Asthenia, suicides, mental disease, cancer and tuberculosis are frequent in the preceding generations. Some of the patients present for years only a "sighing sickness." He uses this term for the symptom of sighing occasionally with a deep sigh. Paroxysms of yawning or hiccup are other inspiratory equivalents. Paroxysmal expiratory phenomena, such as a pseudopertussis or attacks of sneezing, may also be encountered.

Temporary Relaxation of the Diaphragm.—Altschul has observed frequently a higher position of the diaphragm in the evening than in the morning. He calls this symptom a "soft diaphragm," and explains it by fatigue of the muscle or of the phrenic nerve.

Insulin Treatment of Dystrophic Infants.—Tezner and Ebel observed no retention of water eight hours after injecting 8 units of insulin in healthy infants. They treated seven infants suffering from chronic nutritional disturbances with insulin; only one of them gained in weight. The dietetic treatment is decidedly superior.

Atropine Stomach Test.—Stranz confirms Ötvös' observation on the prolonged evacuation time of the stomach after injection of 1 mg. of atropine, if the stomach or duodenum contains an ulcer. The method can be used only with approximately normal evacuation time of the stomach.

Bismuth Inunction in Rabbits' Syphilis.—Giemsa explains the negative results of Albrecht and Evers by important differences between their technic and the method he had used. He claims to have cured all his four rabbits.

Münchener medizinische Wochenschrift, Munich

73: 47-90 (Jan. 8) 1926

Diet in Grave Tuberculosis. F. Sauerbruch et al.—p. 47. C'td.
Treatment of Gastric Ulcer. F. König.—p. 51.
*Biology of Surviving Cancer Tissue. N. C. Louros.—p. 53.
*Beginning Cancer of the Prostate. K. Neller and K. Neubürger.—p. 57.
Modified Duodenal Tube. E. Schlief.—p. 59.
Acetylene Anesthesia and the Thermocautery. H. Wienecke.—p. 60.
Bandage for Dislocation of the Humerus. K. Wisotzki.—p. 63.
General Paresis in Turkey. A. Schükri.—p. 64.
"Intermaxillary Bone and Congenital Syphilis." A. Buschke and E. Langer.—p. 65.
Shock and the Vegetative System. H. Coenen.—p. 66. C'en.
*Vegetative Regulation of the Skin and Liver. E. F. Müller.—p. 71. C'en.
Professional Rules. Proposed Code of Ethics. H. Bergeat.—p. 75.
"Blood Sugar Determination." L. Flatow.—p. 90.

Biology of Surviving Cancer Tissue.—Louros incubated scrapings and sections of tumors in alkalinized Ringer's solution under addition of glucose and of bromine-thymol-blue as indicator. Considering a difference of $p_H = 0.2$ as observation errors, he confirmed that the cancer material produced about the same amount of acid under aerobic and anaerobic conditions. Other material did it in only 20 per cent of the cases. The glycolysis was much more pronounced under anaerobic conditions in the rest.

Beginning Cancer of the Prostate.—Neller and Neubürger examined histologically the prostate glands from forty men. They found atypical proliferations of the epithelium in seven of them. It occurred in every fourth man over 60 years of age, and it presented histologically all the transitions to a carcinoma. A malignant tumor may be present in a macroscopically normal gland.

Vegetative Regulation of the Skin and Liver.—Müller investigated the close connection between the autonomic regulation of the function of the skin (especially the permeability, and the tonus of the blood vessels) and of the organs supplied by the splanchnic nerves. The reaction of both systems is balanced in the opposite direction. Under pathologic conditions, this equilibrium might be either fixed or abnormally changeable. Vagotonia and sympathicotonia are not the expressions of a one-sided hyperirritability of the whole organism. He regards them as conditions characterized by the abnormal tendency to react to small stimuli by a fixed opposite attitude of the peripheral and the splanchnic systems.

Wiener klinische Wochenschrift, Vienna

39: 65-92 (Jan. 14) 1926

Dichlorene-Ether Anesthesia. P. Albrecht.—p. 65.
*Intermittent Effusions in Joints. H. Schlesinger.—p. 68.
Acute Myeloblastic Leukemia. G. Adamek and A. Grassberger.—p. 72.
*Disturbances from Horse-Shoe Kidney. E. Brecher.—p. 75.
Treatment of Rheumatic Affections. O. Nemetz.—p. 77.
"Secondary Growth of Hair." J. Olivet.—p. 78.
Insufflation of Fallopian Tubes. E. Graff.—p. 78.
Urine Infection, Cystitis and Pyelitis. V. Blum. Supplement.—pp. 1-24.

Intermittent Effusions in Joints.—Schlesinger reports a few new cases of intermittent swelling of joints. The knee was affected in all of his cases; other joints were sometimes swollen besides. The condition recurs sometimes at regular intervals. He regards the effusion as a variety of Quincke's edema. He observed it recently in five members of one family. Two of them suffer also from attacks of edema of the mucous membranes of mouth and pharynx and one from asthma.

Disturbances from Horse-Shoe Kidney.—Brecher reports two cases of apparently healthy horse-shoe kidney causing considerable subjective disturbances. These are due to stretching of the pedicle and pressure of the middle part on the blood vessels and nervous plexus. The pains are increased by lordosis. Lack of appetite, pyrosis and other gastrointestinal symptoms may be the chief complaint. Discission of the connecting part was followed by complete recovery in his two cases. The syndrome had been described by Martinow in 1910.

Zeitschrift für Urologie, Leipzig

19: 5-74, 1925. Wildungen Lectures Supplement

*Treatment of Nephritis Patients. F. Volhard.—p. 5.
Pathology of Nephritis. M. Versé.—p. 17.
Roentgenography in Urology. E. Joseph.—p. 26.
*Acid-Alkali Elimination Test. E. Rehn.—p. 27.
*Surgery and Function of Kidneys. E. Rehn.—p. 38.
Neoplasms of Urinary Apparatus. F. Suter.—p. 47.
Colon Bacillus Infection of Urinary Passages. F. Suter.—p. 57.
Treatment of Uric Acid Diatheses. F. Gudzent.—p. 71.
Treatment of Diabetes. F. Gudzent.—p. 73.

Treatment of Nephritis Patients.—Volhard gives a short review of the principles on which he bases treatment of kidney disease. A simple hematuria does not require any dietetic treatment; removal of the infectious focus (tonsils, teeth) is all the patient needs. Edema without signs of insufficiency of the kidneys yields to a dry diet, free from salt. Condiments are allowed (except salt). Large doses of urea, or thyroid treatment may be necessary. A dry diet is always indicated with impending insufficiency of the heart. In acute nephritis, besides purgation, the "hunger and thirst" treatment maintained for three or five or more days are essential for prevention of dilatation of the heart and eclamptic pseudouremia. This treatment prevents the disease from becoming chronic. With anuria of two or three days' duration, decapsulation, or roentgen irradiation of the kidney or anesthesia of the splanchnic nerve is necessary. Every acute nephritis should be regarded as a serious affection of the heart; digitalis is practically always indicated until the pulse is 50-60, since it is usually slower in spite of the dilatation of the heart. With insufficiency of the kidneys, a diet poor in proteins and salt, and in grave cases a vegetable diet should be prescribed.

Acid-Alkali Elimination Test.—Rehn examined the hydrogen ion concentration of the urine after administration of hydrochloric acid by mouth and after injection of 40 cc. of

a 4 per cent solution of sodium bicarbonate—the whole test sometimes at one sitting. Many sources of error are liable to occur: overheating or shaking of the bicarbonate solution, one-sided diet, and drugs. Atropine induces a strongly acid urine by its action on the gastric secretion, morphine and scopolamine by their action on the respiration center. Papaverine also produces the same effect. Caffeine and, to a less degree, digitalis, alkalinize the urine. He found clinically and experimentally that diseases of the tubuli (nephrosis) prevent the elimination of acids; disease of the glomeruli inhibits the alkali excretion. Diffuse affections inhibit both. Vagotonia may cause a rigidity (*Nierenstarre*) on the alkaline side, sympathicotonia an acid urine.

Surgery and Function of Kidneys.—Rehn has been impressed by the discrepancy between the rarity of metastases from an untreated hypernephroma and their extreme frequency after radical operations. He attributes this to the rough handling of the kidneys during the operation. They can be avoided by exposing the renal vein first—instead of last—and throwing a provisional ligature around it before drawing out the kidney. He cured a patient whose tumor had grown through the renal vein into the vena cava. If the other renal vein reaches the cava proximad, the latter may be ligated. Otherwise the other renal vein must be sutured into the stump of the cava. In nephrotomy he prevents the dangerous late hemorrhage (in 19.5 per cent of the Mayo statistics, he quotes) by incision in Zondek's or more rarely Marwedel's plane, exact suture, provisions for good drainage of the pelvis, and—what is very important—nephropexy to avoid stasis of blood.

Zentralblatt für Chirurgie, Leipzig

53: 65-128 (Jan. 9) 1926

Skin Hemorrhages After Compression of a Leg. R. Morian.—p. 66.
Internal Male Pseudohermaphroditism. S. Davidovic.—p. 70.
Splint for Fractures of the Legs. F. Matt.—p. 72.
Extension Apparatus. T. Fohl.—p. 76.
Hemangioma of the Breast. B. Lubarsky.—p. 77.
An Orthopedic Shoe. G. Gabriel.—p. 80.
Surgical Correction of Gastroptosis. O. Orth.—p. 84.
*Fat Infiltration of the Omentum. G. Brossok.—p. 86.
*Incarcerated Juxtavesical Hernia. Kudrnáč.—p. 88.
"Surgery of Scoliosis." H. von Baeyer.—p. 90.

Fat Infiltration of the Omentum.—Brossok observed one case of the syndrome described by O. Maier: The obese patient had pains in the abdomen, especially in the erect posture, and was constipated. She recovered after resection of a total of 340 Gm. of her abnormally fat omentum. Traction from the abnormally heavy omentum had been responsible for the pains. They did not return after the resection.

Incarcerated Juxtavesical Hernia.—Kudrnáč's patient did not improve after surgical reposition of an incarcerated femoral hernia. The second operation revealed an incarcerated juxtavesical hernia, which also accounted for the incarceration of the former. The patient recovered after resection of the intestine.

53: 129-192 (Jan. 16) 1926

Operative Closure of Artificial Anus. E. Sonntag.—p. 130.
Surgery of Hallux Valgus. T. Sazepin.—p. 134.
Treatment of Habitual Dislocation. S. S. Girgolaff.—p. 138.
*Surgery of Mitral Stenosis. A. Jarotzky.—p. 140.
Rapid Preparation of Casts. H. Magnus.—p. 142.
Autohemotherapy of Pneumonia. W. Graef.—p. 143.
Priority Claim in Autohemotherapy of Pneumonia. H. Reimann.—p. 144.

Surgery of Mitral Stenosis.—Jarotzky suggests to make an artificial communication between the auricles. It is known that a mitral stenosis complicated with an open foramen ovale has a comparatively good prognosis. The operation could be performed by the simple way of introduction of the instrument through the jugular vein.

Zentralblatt für Gynäkologie, Leipzig

50: 65-128 (Jan. 9) 1926

*Synergistic Analgesia in Labor. E. Vogt.—p. 65.
Pseudomyxoma and Heterotopic Proliferations. J. Koerner.—p. 83.
Granulosa Cell Tumors. F. Isbruch.—p. 89.
*Treatment of Ovarian Hemorrhages. P. Sippel.—p. 99.
Surgery in Treatment of Menstrual Disorders. W. Hannes.—p. 105.
"Treatment of Hemorrhagic Metropathy." Engl.—p. 111.
Hemorrhage from the Ovary. P. Klein.—p. 111.
Hemorrhage from Pregnancy Corpus Luteum. M. Dolynskyj and I. Benzion.—p. 117.

Synergistic Analgesia in Labor.—Vogt deals with the theoretical foundation and with the results of Gwathmey's method. It is contraindicated in diabetes, eclampsia without spasms and grave eclampsia, and in all forms of liver, kidney and colon disease. The results are excellent, but the method requires continuous medical supervision. Consequently it is not suitable for the private home, when the patient is temporarily under the care of only a nurse.

Treatment of Ovarian Hemorrhages.—Sippel treated successfully twenty girls suffering from profuse menorrhagias and metrorrhagias by transplantation of pieces of human ovaries. Ovarian cysts, which were found in some of the patients, were enucleated. In some of them the uterine mucosa during the hemorrhages was evidently not functioning. After the transplantation and return of normal menstruation, the uterine mucosa resumed the typical aspect and contained glycogen.

Zentralblatt für innere Medizin, Leipzig

47: 33-56 (Jan. 9) 1926

The International Malaria Congress at Rome. Friedeberg.—p. 33.
*Occupational Injury and the Amyostatic Syndrome. J. Löwy.—p. 41.

Occupational Injury and the Amyostatic Syndrome.—Löwy reports two cases wherein a trauma provoked or aggravated Wilson's disease.

Časopis lékařů českých, Prague

65: 1-36 (Jan. 1) 1926

The Cancer Problem. R. Kimla.—p. 1.
*Hydrophobia from Fixed Virus? L. Syllaba.—p. 7.
*Acute Tuberculous Sepsis. J. Pelnář.—p. 12.
*Drainage of the Ventricles of the Brain. A. Váňa.—p. 20.
Treatment of Epilepsy. V. Vondráček.—p. 24.

65: 37-72 (Jan. 8) 1926

Surgery of the Heart. J. Diviš.—p. 37.
Volvulus of the Cecum. J. Podlaha.—p. 40. C'td.
Cultivation of Vaccine Virus. K. Urbánek.—p. 47. C'td.
Pathology of Aphasia. A. Heveroch.—p. 56. Begun p. 16.
Kolmer's Extract. B. Tomášek.—p. 63.

Hydrophobia from Fixed Virus?—Syllaba reports a case of ascending paralysis in a woman subjected to preventive vaccination against hydrophobia because of a bite of an animal. He discusses the etiology, and is inclined to attribute the syndrome to the inoculations rather than to an original infection mitigated by these inoculations. The patient is improving.

Acute Tuberculous Sepsis.—Pelnář reports a case of a high fever in a boy. The appetite was good. Examination revealed only an enlargement of the bronchial lymph nodes. There was a slight increase in neutrophils, with shifting to the left, and an eosinophilia. The tuberculin reaction and Besredka test were positive. Landouzy had recognized the tuberculous nature of such a syndrome, and called it "typhobacillosis" because of a resemblance to typhoid. The acute stage may lead to death or may be followed by localizations of the process, which may also be fatal, as it was in this case.

Drainage of the Ventricles of the Brain.—Váňa drains the cerebrospinal fluid in hydrocephalus into the infratemporal fossa. The method avoids the swelling of the eyelids which is an unpleasant by-effect of Hildebrand's operation.

Prophylaktitcheskaia Medicina, Kharkov

4: 1-202 (Dec.) 1925. Partial Index

Variations of Bacilli and Their Significance in Epidemiology. I. Gakh.—p. 15.
Subneutral Toxin-Antitoxin Mixture in Immunization Against Diphtheria. M. Gluzman.—p. 24.
The Dying Out of Epidemics. D. Zabolotny.—p. 34.
*Vaccination Against Scarlet Fever. E. Popoff.—p. 45.

Vaccination Against Scarlet Fever.—Prophylactic vaccination against scarlet fever was applied by Popoff in 790 children, from 5 to 15 years old. The vaccine was prepared by the Gabrichevsky or Zlatogoroff method. A total of 1,866 injections were made, in most of the children three injections subcutaneously. The vaccination induced a reaction presenting a "scarlatinoid syndrome." General uneasiness

appeared four or five hours after the injection, followed soon by a marked local reaction, sometimes fever. A rash became manifest in some of the children in fifteen or twenty hours, accompanied by redness of the tongue and tonsils, exceptionally by swelling of the glands. All the pathologic signs disappeared in two or three days, and the child recovered completely. The reaction seemed more pronounced in boys than in girls. Only five of the vaccinated children contracted scarlet fever; one after two and four after three injections. While the percentage of scarlet fever cases among the vaccinated children was 0.63, among the nonvaccinated it was over 7. The vaccine did not induce any persisting disturbances, and therefore, Popoff says, it may be considered as harmless.

Vestnik Microbiologii i Epidemiologii, Saratov

4: 3-92, 1925. Partial Index

The Coccidia Question. V. Yakimoff and V. Vasilevskaia.—p. 9.
*Gonococcus Antigen Reaction. S. Boru and S. Sherishorina.—p. 47.
*Vaccination Against the Staphylococcus. E. Korobkova and E. Rosanova. —p. 49.
Experimental Gonorrhea in Rabbits. S. Boru and S. Sherishorina.—p. 47.

Gonococcus Antigen Test.—Boru and Sherishorina observed six infants, from 2 weeks to 2 months old, with gonococcal ophthalmia. The reaction to an intradermal injection of gonococcus antigen was positive in all of them. The injections were repeated eight or ten times during two months, till the reaction became negative. The appearance of a negative reaction coincided with the vanishing of the eye discharge and the disappearance of the gonococcus from smears and cultures.

Oral Vaccination Against the Staphylococcus.—Korobkova and Rosanova tried staphylococcus vaccine, by mouth, in treatment of furunculosis, after experiments on rabbits and on themselves had proved the method to be harmless. The vaccine, prepared from about nineteen different strains of staphylococci, was sterilized by exposure to heat or formaldehyde. A single dose of the emulsion of powdered bacteria contained from 75 to 100 thousand millions of staphylococci. One capsule of the vaccine was taken, fasting, on alternate days, in a little milk, waiting half an hour at least before eating afterward. Among 102 patients, aged from 4 months to 60 years, twenty-eight had furunculosis of two years' standing or more; the remaining eighty-six, only for two or three months. No more than fifteen or sixteen doses were needed as a rule. If this failed, then an autovaccine was used. There was no local or general reaction to the vaccine. The treatment proved effectual in 88 per cent of the cases. Improvement was manifest after four or five doses. The agglutination test was negative in ten serums examined.

Acta Chirurgica Scandinavica, Stockholm

59: 439-564 (Jan.) 1926

Retrograde Incarceration of the Ileum. A. Rosenfeld.—p. 439.
Lymphangioma of Spermatic Cord. A. Rosenfeld.—p. 447.
*Suprapubic Prostatectomy. E. Tengwall.—p. 455.
Surgery of Adhesive Pericarditis. M. Ljungdahl and E. Tengwall.—p. 480.
Surgery of Pituitary Tumors. R. Lund.—p. 491.
Sedimentation Test in Surgery. A. Troell.—p. 523.
*Subphrenic Abscess with Vomited Gallbladder. B. Fernström.—p. 534.
Embolism of Popliteal Artery. A. Odelberg.—p. 540.
*Epileptiform Spasms in Cervical Paravertebral Anesthesia. O. Römcke. —p. 545.

Suprapubic Prostatectomy.—Tengwall reports a mortality of 10.8 per cent in his 250 cases of suprapubic prostatectomy. Epididymitis occurred in 23 per cent. He describes his technic in detail.

Subphrenic Abscess with Vomited Gallbladder.—Fernström opened a subphrenic abscess containing gallstones. The necrotic gallbladder had been expelled in vomit, together with blood, before the intervention. The patient recovered.

Epileptiform Spasms in Cervical Paravertebral Anesthesia.—Römcke describes two cases of grave epileptiform convulsions provoked by cervical paravertebral anesthesia, as preparation for thyroidectomy. The accident was probably due to intradural injection by way of the intervertebral foramen. To avoid this, it is necessary to refrain from introducing the needle in front of the tuberculum posterius.

Hygiea, Stockholm

87: 817-848 (Nov. 30) 1925

*Calcified Brain Tumors. E. Melkersson.—p. 817.
Prostatectomy Experiences. E. Tengwall.—p. 829. C'en.

Calcified Brain Tumors.—Melkersson reports two cases. Symptoms at the age of 12 had been interpreted as a tubercle in the brain, but they soon subsided nearly completely. At 20, ataxia in the left arm, dizziness, with occasional headache, developed, and the roentgen rays showed a calcified tumor in the left tentorium. The condition then improved somewhat, and has kept stationary for nine years to date. Melkersson intends to propose an operation if the symptoms show a progressive tendency. In the second case, spastic left hemiplegia developed at the age of 9 with a febrile course for a time. The symptoms gradually improved and now, at the age of 16, there is no doubt of an intracranial calcified tumor, almost inevitably of tuberculous origin, affecting vision and the sense of smell, with a suspicion of multiple foci. He regards the stationary course for years in both cases as almost equivalent to a cure with a brain tumor.

Norsk Magazin for Lægevidenskaben, Oslo

86: 1293-1372 (Dec.) 1925

*Tetany After Operations on the Thyroid. N. H. Brodersen.—p. 1293.
*Surgical Treatment of Gastric Cancer. F. S. Hanssen.—p. 1305.
*Duodenal Ulcer. K. Nicolaysen.—p. 1318.
*Results of Gastro-Enterostomy. K. Nicolaysen.—p. 1322.
Internal or Surgical Treatment of Hemorrhagic Gastric Ulcer. J. H. Berner.—p. 1329.
Malaria and Protein Therapy of Paresis. H. A. T. Dedichen.—p. 1335.
A Case of Eunuchoidism. R. R. Jørgensen.—p. 1339.

Tetany After Operations on the Thyroid Gland.—In Brodersen's experience there were five instances of consecutive tetany among 647 thyroidectomy cases, including 345 of simple goiter with 0.3 per cent cases of tetany, and 1.3 per cent in the hyperthyroidism cases. The injury to the parathyroids must have been transient in two of the cases as the tetany soon subsided; in another case it persisted for a year before subsiding, and in the two others the tetany has persisted practically unmodified to date except as it is kept under control with calcium treatment; 6 and 11.5 Gm. of calcium were required at first. These two graver cases were in patients of 17 and 21. Parathyroid tablets gave no relief. One patient has been able to suspend the calcium and has been free from symptoms for a year and a half; the other still has to take the calcium daily but has been able to reduce the dose to a teaspoonful of calcium lactate once a day.

Gastric Cancer.—Summarizing the outcome in 280 cases of gastric cancer, Hanssen states that the patients survived on an average 658 days after gastrectomy, and 225 days after gastro-enterostomy alone. In the fifty-one gastrectomy cases, 29.4 per cent of the patients survived for three years or more but only six are healthy now, from over three to fifteen years since the intervention. Eight died from recurrence of the cancer, from three to seven years later, and one of the survivors now has pernicious anemia, seven years afterward.

Logical Treatment of Duodenal Ulcers.—Nicolaysen presents evidence to sustain the view that a chronic ulcer in the stomach is the same ulcer all the time, but in the duodenum the ulcer heals and a new one develops, repeating the process indefinitely. Duodenal ulcers do not share the chronic character of gastric ulcers; the predisposition is what persists. Hence, in operating, regardless of the findings in the duodenum at the moment, a third of the stomach should be resected as the only means to conquer the predisposition. He warns expressly against mere gastro-enterostomy for duodenal ulcer, as this may not reduce the acid secretion.

The Action of Gastro-Enterostomy.—Nicolaysen relates that analysis of fifteen patients recently treated by gastro-enterostomy and of twenty-three with an interval since of five to ten years, demonstrates that the benefit is proportional to the reduction of the acidity. The reduction of the acidity generally coincides with rapid evacuation of the stomach. Filling up of the antrum always coincides with considerable persisting acidity. All of the eleven who were not cured by the gastro-enterostomy years ago still have persisting acidity; the majority of the cured have no free hydrochloric acid.